TELEPHONY

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THE JOURNAL OF THE TELEPHONE INDUSTRY

STROMBERG-CARLSON Factory, General Offices: Rochester 3, New York. Branch Offi anta

Among Your Best Investments...

For the operating company interested in regular earnings, a Stromberg-Carlson Convenience System ranks with bonds, stocks and money-in-the-bank. Its initial cost is low—its service life amazingly long —its time-saving, confidential features appeal to alert business executives —and its placement on a subscriber's desk justifies increased rates.

Your Stromberg-Carlson representative will be glad to work with you in an analysis of likely Convenience System prospects in your own service area and to help you prepare a "sales" presentation to them.

Offi anta 3, Chicago 6, Kansas City 8, San Francisco 3. In Canada: Stromberg-Carlson Co. Ltd., Toronto

INDEPENDENT TELEPHONY'S

First Choice

KELLOGG

Masterphones

1000 SERIES

VACATION NOTICE

The Kellogg Factory and Chicago Branch will be closed for vacation, July 14th through July 25th.

TOMORROW'S *Finest* TELEPHONE INSTRUMENT . . .

DESIGNED FOR YEARS TO COME

FAST, PROMPT DELIVERY

REATEST UNIFORMITY
F TRANSMISSION

"FACE-TO-FACE"
SIDE-TONE CONTROL

SIMPLER DESIGN—

MAINTENANCE
SIMPLIFIED

If a word to the wise is sufficient — that word is MASTERPHONE! Independents everywhere have found Kellogg (1000 Series) Masterphones the finest instruments ever perfected — so far advanced that they will remain modern for many years!

Masterphones merit a place in *your* modernization program! They assure better subscriber service. And they will give you the benefits of lower maintenance costs. In addition, *Masterphones will guard you against premature obsolescence!* Standardize on Kellogg Masterphones and insure yourself of more profitable operation for the years to come!

Due to increased production methods, we are glad to announce that Kellogg Masterphones (1000 Series) are now available for prompt shipment. Get the facts — and you'll get Masterphones. For full information, write on your letterhead to —

KELLOGG SWITCHBOARD AND SUPPLY COMPANY

AN IT&T ASSOCIATE

6650 S. Cicero Avenue, Chicago 38, Ill.

An International Telephone and Telegraph Corporation Associate

SUPPLIES OF Proven Dependability

● Shipment of guaranteed line supplies made from distribution center nearest you . . . Kellogg's warehouses located in Chicago, Kansas City, Dallas and San Francisco.

The following nationally-known manufacturers of supplies for the independent telephone field are participating in the 1952 Kellogg Co-operative Campaign.

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American Structural Products Co.

Ansonia Electrical Company

Bishop Manufacturing Co.

Boston Woven Hose and Rubber Company

Churchill Cabinet Company

Continental Cross-Arm Co.

Cook Electric Company

Copperweld Steel Company

The Electric Storage Battery Co.

General Insulated Wire Works, Inc.

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W. A. Hammond Drierite Company

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National Carbon Company
A Division of Union Carbide and Carbon Corporation

National Telephone Supply Co.

Fits Telephone Needs to a "T"—The Ray-O-Vac 6 telephone cells are ideally suited for telephone work because the RAY-O-VAC COMPANY has perfected a specially compounded mix which permits these cells to give lower cost per hour of service. Economical and dependable.

Neat, Precision Soldering is easy when you use a Vulcan Electric Soldering Iron. These high-powered, VULCAN ELECTRIC CO. irons come in various sizes of screw and plug-tip types. Also the "Pygmy"—a pencil type electric soldering tool used for work in cramped spaces.

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Paragon Electric Company

Raytheon Manufacturing Co.

Ray-O-Vac Company

Reliable Electric Company

M. M. Rhodes & Sons Company

Schauer Manufacturing Corp.

Taca Cable Stripper Manufacturing Co.

Vulcan Electric Company

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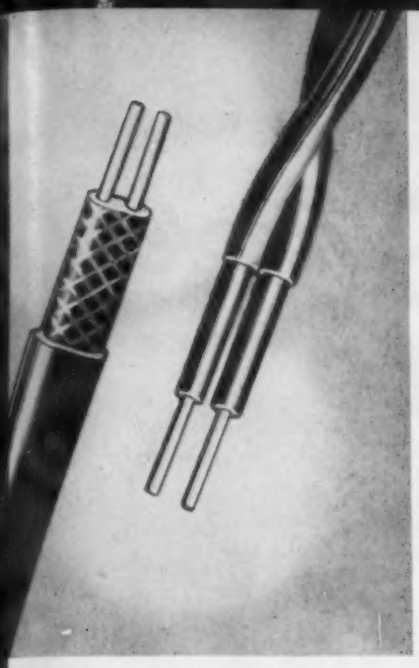
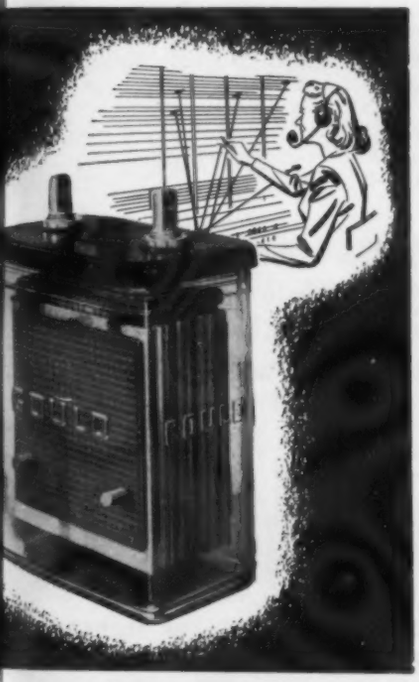


g Service Life and Low Plant Costs go hand-hand with the installation of ENDUR-ENE—The Neoprene Drop Wire available both Copperweld and Bronze. This flexible easy to handle wire is made by the GEN-AL INSULATED WIRE WORKS, INC.

Dust-Tight! Moisture-Tight! Paragon Battery Boxes provide a convenient method of keeping dry cell batteries clean and dry. Available in sizes for 2 or 3 Standard No. 6 dry cells. Box is attractive—cover is attached to box by chain. Made by PARAGON ELECTRIC CO.

The New Hi-Cap Power Cross Protector is designed for use where communication and power circuits of higher voltage occupy same wood pole. This protector is capable of carrying power fault currents until power breakers open. Made by COOK ELECTRIC CO.



tstanding Battery Performance is yours when u choose Gould Planté Batteries. Thick, oved, pure lead positive plates give many ars of trouble-free service! Made by GOULD-ATIONAL BATTERIES, INC., a leader in ir field. They're the finest money can buy.

First Choice of the Telephone Industry! The Raytheon RectiChargeR is fully automatic, maintains constant output voltage regardless of variation of load and line voltage. Never overcharged or undercharged, batteries last longer. RAYTHEON MANUFACTURING CO.

Poles That Last!—the fine creosoted Southern Pine poles selected by T. J. MOSS TIE COMPANY are exceptionally sturdy and durable—will give longer years of service. Poles are uniform in size and pressure-treated to conform to rigid standards of quality.

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BETTER FOR TELEPHONY

-Because it's Simpler!

Federal PTM
(PULSE TIME MODULATION)
MICROWAVE

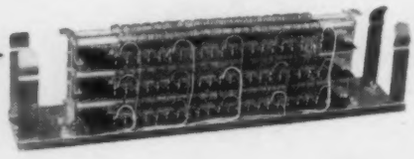
Streamlined Circuitry and Fewer Tubes Provide Greater Economy and Dependability!

SIMPLICITY... that's the basis for the greater efficiency, reliability and economy of maintenance of Federal Pulse Time Modulation Microwave ... for complete communications over any distance or terrain ... without new line construction!

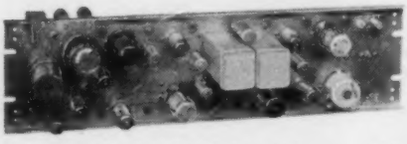
Through simpler equipment—requiring *fewer* tubes—Federal PTM meets the telephone industry's needs for extra circuits for trunks and toll ... distant rural expansion ... extensions to new developments ... extended area service ... mobile radio ... broadcast relay, facsimile, teletype and other leased wire services ... via dependable, high-quality, stormproof radio facilities.

Get the facts about Federal PTM's system-wide superiority and proved performance ... about Federal's more than 20 years of experience in microwave engineering, planning and installation. Write today to Dept. H-748.

Federal PTM Delay Line
—*"Heart of the System"*



Remarkably compact and efficient ... *has no tubes.* Maintains absolute synchronization between channels ... provides non-shifting channel selection ... eliminates crosstalk.



Federal PTM Pulse Generator

Supplies synchronizing pulse to delay line for simple, automatic channel synchronization, eliminating elaborate individual channel tuning provisions. Uses *fewer* tubes ... greatly increases system dependability.

Simplest in the Field!

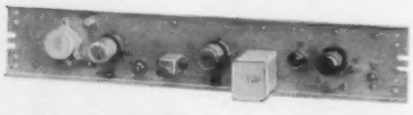
Federal PTM

Modulator and Demodulator

Outstanding for minimum-tube design and interchangeability. Plug-connected for ready maintenance ... greater economy in stocking of spare parts.

HERE are some of the Federal PTM multiplex elements that demonstrate the Simplicity of Design that makes Microwave by Federal—

"Microwave at its BEST"



Federal PTM Pulse Restorer

A valuable insurance factor in longer systems. Automatically cuts in and converts repeater into temporary terminal if adjacent repeater fails ... maintains communication over remainder of system.

MICROWAVE MOVIE: Be sure to see Federal's new 16 mm. sound-color motion picture *"Microwave for Modern Telephony."* Prints shipped without charge for company personnel or organization showings. Write to: Film Distributing Dept.

FEDERAL TELECOMMUNICATION LABORATORIES, Nutley, N. J. ..... a unit of IT&T's world-wide research and engineering organization.

Federal Telephone and Radio Corporation

WIRE AND RADIO TRANSMISSION SYSTEMS DIVISION
100 KINGSLAND ROAD, CLIFTON, NEW JERSEY

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.

FEDERAL TELEPHONE & RADIO — FTR — An IT&T Associate

it's the RESULTS THAT COUNT!

results . . . The ***Satisfactory Results*** produced during our 42 years of experience—specializing in telephone directory advertising—have ***attracted more and more customers*** to our company.

results . . . The ***Net Results*** attained on every canvass by ***adding more and more revenue*** to the directories have assured our customers of ***Greater Profits***—for operating expense and dividends.

results . . . The ***Favorable Results*** produced by ***maintaining more and more reliable, accurate, attractive and well designed books*** have set today's pattern for ***Modern Streamlined Directories.***

CALL OR WRITE FOR DETAILS . . . . **TODAY!**

TELEPHONE DIRECTORY ADVERTISING EXCLUSIVELY

L. M. BERRY AND CO.

Hulman Building, Dayton 2, Ohio - Telephones Michigan 7421-L.D. 16

BRANCH OFFICES in Birmingham, Alabama, • Bristol, Chattanooga, Memphis and Nashville, Tennessee • Harrisburg, Pennsylvania • Jackson, Mississippi Kansas City, Kansas • Louisville, Kentucky • Milwaukee, Wisconsin • New Orleans, Louisiana • Rochester, New York • Tampa, Florida • Warsaw, Indiana

FLASHES AND PLUGS

THAT'S THE WAY IT GOES. In a not-so-recent issue of *The Saturday Review of Literature* appeared the following success story successfully told:

"Once in a lifetime an opportunity is afforded a modest book publisher to dazzle a high-powered movie publicist in Hollywood. To Allan Ullman, trigger man of the Random House sales-promotion staff, befell such a rare and heady moment recently.

"A frantic telephone call from M-G-M revealed the fact that Dore Schary's 'Case History of a Movie' was sold out in every bookshop in Hollywood, and that six copies were needed instanter in the home office.

" 'Rush them first-class mail, special delivery,' pleaded the M-G-Missary.

" 'Random House does not cope with emergencies in any such archaic manner,' said Ullman loftily. 'We'll send you the copies by special messenger. They'll be in your office at ten tomorrow morning.'

" 'You don't understand,' cried the bewildered movie executive. 'I'm calling from Culver City, Cal.'

" 'Of course, I understand,' Ullman assured him. 'You're simply not used to Random House service.' Then he hung up.

"Sure enough, the six copies of 'Case History of a Movie' were delivered personally at M-G-M the following morning.

"Secret: Irving Ash, big-time Beverly Hills insurance expert, happened to be sitting at Ullman's desk when the call came through. He also happened to have remarked that he was boarding a Stratoliner for Los Angeles that evening."

• • •

NEVER PUT OFF TILL TOMORROW. Most writers can think of more ways to postpone getting down to work than a high school senior with a prom and his girl on his mind. Recently cited by Bennett Cerf was the case of one Hollywood scenario scripter who definitely had to have a job completed by the following morning.

His understanding wife inserted a fresh page in his typewriter, even disconnected the telephone, grabbed both kids by the hand, and left him in sole possession of the premises. They rode to the end of the bus line and back, saw a double feature at the neighborhood movie, and came home at the tag end of the day to see how far daddy had gotten.

He hadn't done too badly. As they walked through the door, he was just polishing the last piece of their 80-piece sterling-silver dinner set.

• • •

NOT ON THE PAYROLL. San Rafael, Cal., *Independent-Journal* recently reported the activities of an unusual telephone helper.

Over a period of several weeks Freddie, the helper, accompanied Dick Nuttman, an installer repairman, as he checked dials on handsets in San Rafael and made other adjustments. This particular helper is called the telephone dog by the telephone men he makes the rounds with. Freddie is owned by F. I. Deetkin of San Anselmo.

For five years Freddie has been working with telephone maintenance men. Five days a week Freddie reports at Pacific Telephone & Telegraph Co.'s garage near his home, and always before 8 a.m.

Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

July 12, 1952

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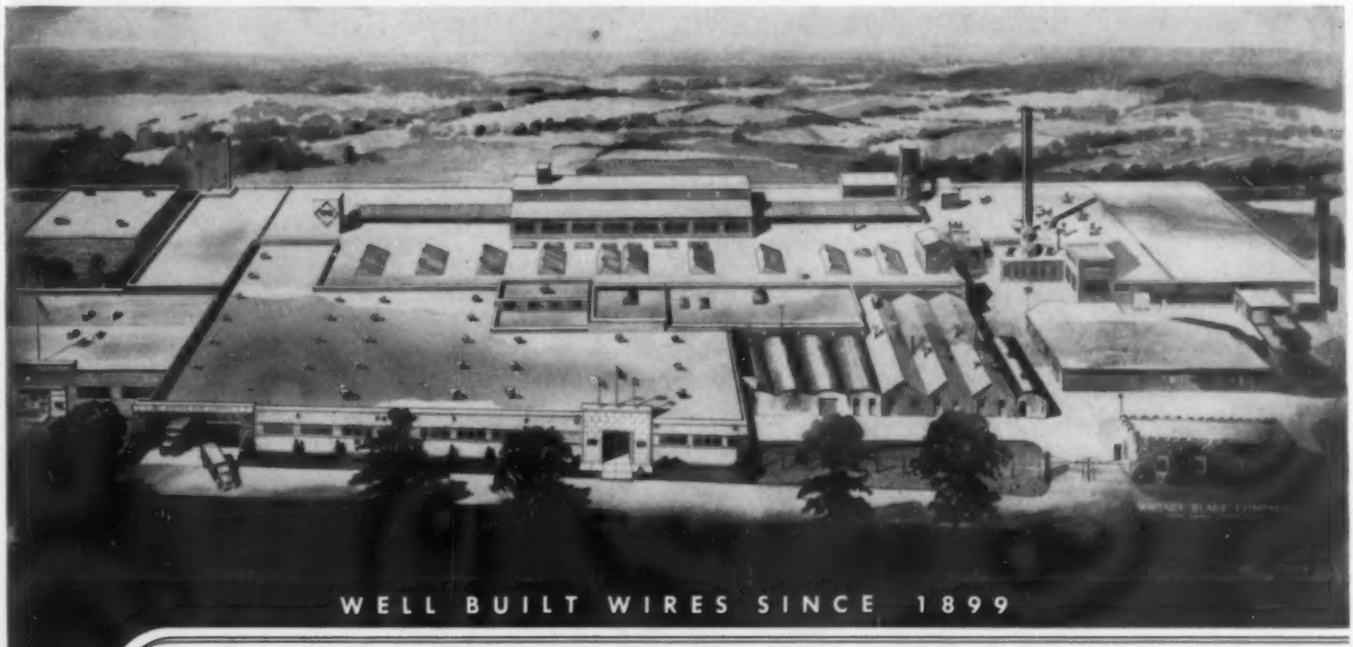
Telephone WA bash 2-2435
608 S. Dearborn St., Chicago (5), Ill.
U. S. A.

RESEARCH...

The Whitney Blake laboratory is one of the largest and most modern in the telephone wire field. A large staff of chemists and research technicians is maintained whose constant aim is to produce wire for the Independent Telephone Industry that will provide longer and better service and reduce costs. This consistent effort to improve is largely responsible for Whitney Blake's leadership.



WELL BUILT WIRES SINCE 1899

WHITNEY BLAKE COMPANY

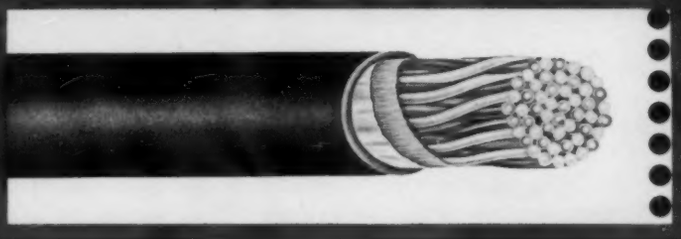
NEW HAVEN 14, CONNECTICUT

ANSONIA

Ankoseal®

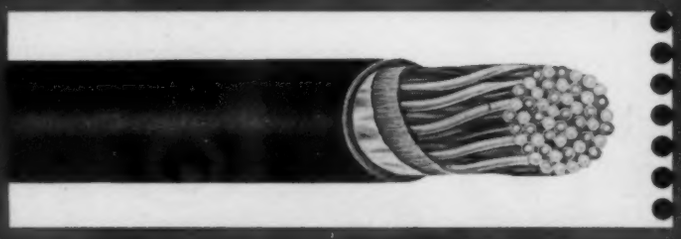
ALL-PLASTIC
TELEPHONE CABLES

COMBINE HIGHEST PERFORMANCE with LOWEST COSTS!



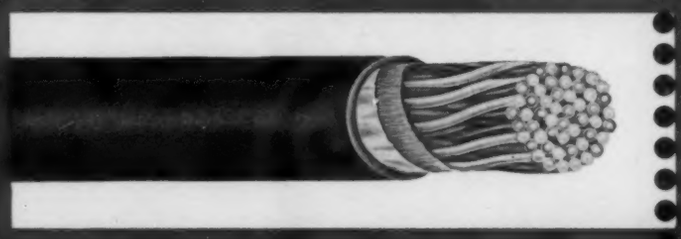
Lighter Weight and Lower First Cost

26 pr. #22 AWG Ankoseal weight 205 lbs/M ft. compared with 675 lbs/M ft. for paper lead! Ankoseal is less expensive than any other construction in most popular sizes.



Longer Life and Lower Installation Cost

PVC jackets are unchanged after 10 years of combined earth and air exposure. Ankoseal's lighter weight means lighter messengers, fewer poles and fewer men per gang to install.



Highest Transmission Characteristics and Lowest Maintenance Costs

Capacitance of Ankoseal #22 AWG is .075 mfd/mile, transmission losses per mile #22 Ankoseal 1.65 to 1.75 db. All-plastic Ankoseal gives you more trouble-free operation, more resistance to electrolytic and chemical corrosion, freedom from cracks and moisture-proof insulation.

If you aren't using Ankoseal Telephone Cables now—you should find out about them—

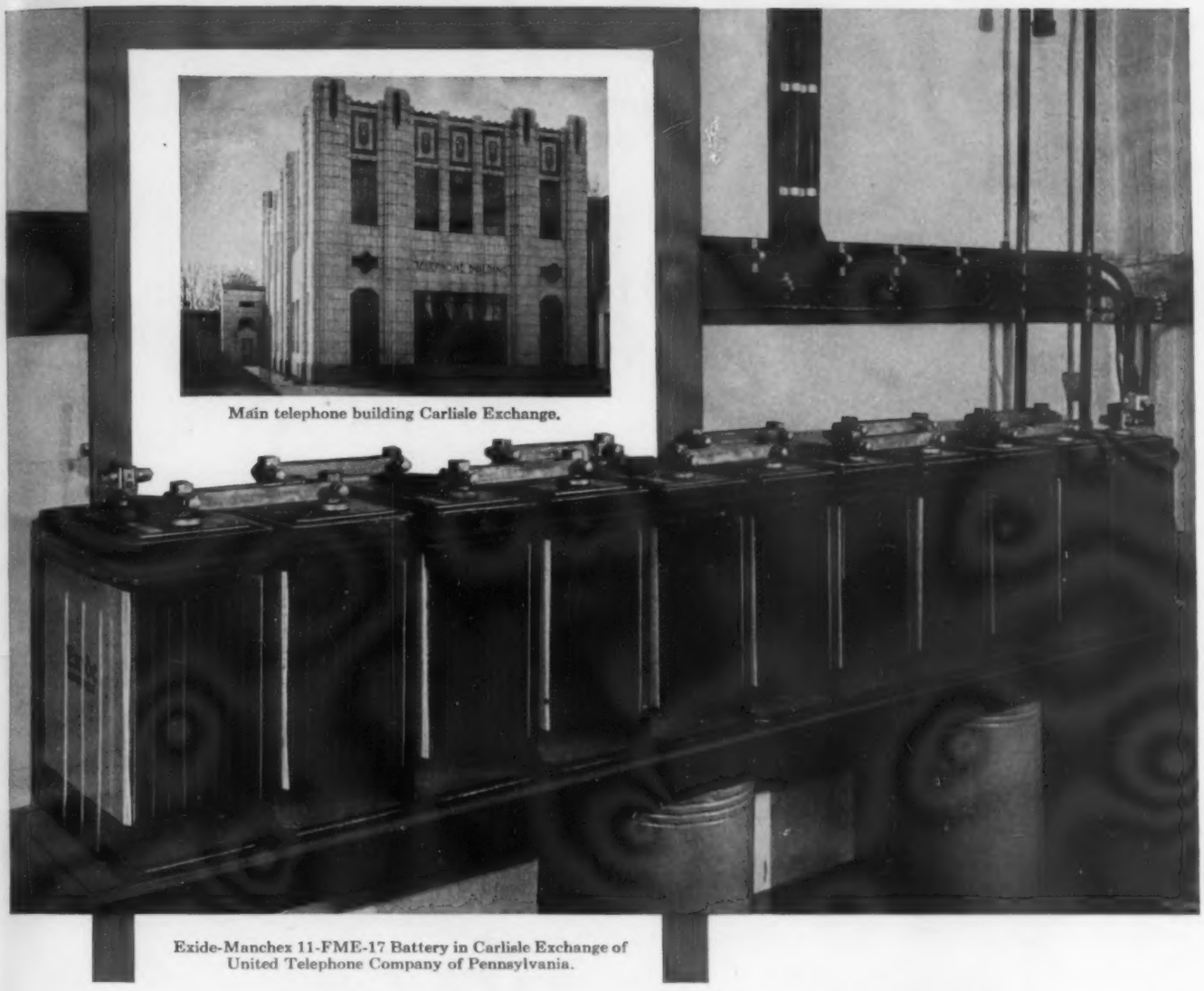
WRITE FOR COMPLETE DETAILS TODAY.

THE ANSONIA ELECTRICAL COMPANY

SUBSIDIARY OF NOMA ELECTRIC CORPORATION

ANSONIA, CONNECTICUT

Tel. Ansonia 4-3286



Main telephone building Carlisle Exchange.

Exide-Manchex 11-FME-17 Battery in Carlisle Exchange of United Telephone Company of Pennsylvania.

Exide-Manchex BATTERIES

ASSURE DEPENDABLE POWER FOR CARLISLE EXCHANGE

It's a progressive exchange in a progressive city... a fast-growing city. For among Pennsylvania's 50 largest cities, Carlisle ranks sixth in population growth during the ten years ending with 1950.

Rapid as this growth has been, the Carlisle Exchange has kept pace with the city's telephone needs. It serves approximately 8,000 subscribers, has a 23-position switchboard, and handles close to 40,000 calls per day. Standby power is provided by Exide-Manchex, the battery that assures:

POSITIVE OPERATION: dependable performance for all telephone battery requirements—central office and private branch exchange equipment.

ADEQUATE RESERVE POWER for emergencies beyond normal needs.

LOW OPERATING COST: extremely low internal resistance.

LOW MAINTENANCE COSTS: water required about twice a year. No change of chemical solution during life of battery.

LOW DEPRECIATION: sturdy, long-life construction which includes the exclusive manchester positive plate.

GREATER CAPACITY in a given amount of space avoids overcrowding of equipment.

These and other features combine to make Exide *your best battery buy . . . AT ANY PRICE.*

• • •

Various sizes and types of Exide Batteries, up to 100 ampere hours capacity, are available in plastic containers.

"Exide" & "Manchex" *Reg. T.M. U.S. Pat. Off.*

THE ELECTRIC STORAGE BATTERY CO. • Philadelphia 2 • *Exide Batteries of Canada, Limited, Toronto*

1888 . . . DEPENDABLE BATTERIES FOR 64 YEARS . . . 1952

Alphaduct Telephone Wire

Alphaduct Plastic-Insulated Inside Wire

Makes a neat installation, is easy to clean and will not support fungus growth or mold. Plastic insulation has high dielectric strength, excellent flexibility, will not deteriorate even in humid climate. Strips freely. Available with 22 A.W.G. or 19 A.W.G. tin-coated copper. Brown or ivory color. Brown shipped unless ivory is specified. In 500-foot coils.

Cat. No.	Size A.W.G.	Diameter over Insulation Inches	No. of Conductors	Approx. Ship. Wt., Lb. per 1000 Feet
VL-222-TC	22	.076	2	10
VL-223-TC	22	.076	3	15
VL-192-TC	19	.086	2	14
VL-193-TC	19	.086	3	21
VS-222-TC	22	.055	2	7
VS-223-TC	22	.055	3	12
VS-192-TC	19	.066	2	11
VS-193-TC	19	.066	3	18

Alphaduct Glazed Braided Inside Wire

Used indoors in dry places to extend the circuit from arrestors or other terminating fixtures of outside lines to station sets. Has hard glazed close braid for light and abrasion resistance. Tin-coated copper conductors with marker threads for polarity identification. In 500-foot coils. Brown color is standard, but is available in ivory or olive green if specified.

Cat. No.	Size A.W.G.	Diameter over Insulation Inches	No. of Conductors	Approx. Ship. Wt., Lb. per 1000 Feet
G-222-TC	22	.056	2	11
G-192-TC	19	.098	2	21
G-223-TC	22	.056	3	17
G-193-TC	19	.098	3	32

Alphaduct Plastic-Insulated Inside Wire With Overall Plastic Jacket

For Use with Stapling Gun

Available in two and three conductors. Overall plastic jacket makes this wire ideal for use with stapling gun for quick, neat inside wiring. Easy to strip, good overall breaking strength for pulling through partitions, etc. This material is suitable for use in either wet or dry locations. Conductors color-coded. Available in brown or ivory. In 500-foot coils.

Cat. No.	Size A.W.G.	Diameter over Insulation Inches	No. of Conductors	Approx. Ship. Wt., Lb. per 1000 Feet
J-222-P	22	.055	2	18
J-223-P	22	.055	3	19

No. 222 Alphaduct Rubber-Covered and Braided Duct Wire

Flame and moistureproof for long service life.

Has the same natural rubber insulation as Alphaduct drop wire with a smooth cotton braid, and weather-proofing similar to Alphaduct drop and bridle wire. Twisted pair conductors are of No. 22 A.W.G. tin-coated soft annealed copper. Colored finishing compound used for polarity. One leg red, one leg green and third leg yellow.

In 500-foot coils.

No.	Size A.W.G.	Diam. over Insulation Inches	No. of Conductors	Approx. Ship. Wt., Lb. per 1000 Feet
222	22	.063	2	13
223	22	.063	3	19

LEICH'S supply policy—only the best tools and materials are the cheapest to use

We NEVER try to sell you tools and materials that are "almost" as good. You can look through our supply catalog and find only the most respected, proved products in any particular line. You save that way. Your people do better work faster—easier. Your installations last longer, cost less to maintain, cost *less* in the long run.

Try Leich supply service. You'll find it helps you get things done. Leich Sales Corporation, 427 West Randolph Street, Chicago 6, Illinois.

PAGE 191 FROM THE **LEICH** SUPPLY CATALOG

MANUFACTURERS OF TELEPHONES, SWITCHBOARDS AND RELATED APPARATUS SINCE 1907

"Sure, we rely upon STANDARDS OF MEASUREMENT"

IN ORDER TO BE SURE of achieving the desired result, a photographer must rely upon many accepted standards of measurement in making one photograph. The emulsion speed of the film he uses, his light meter reading, the regulation of his shutter speed and the amount of lens opening are all established by different standards of measurement.

In nearly every field of endeavor, there are accepted standards of measurement by which relative worth or performance is judged. There are, however, a few outstanding exceptions to this rule. For example, we find that very few Independent Telephone Companies have ever checked the worth of their directories by applying a proven standard of measurement.

LET US ASK YOU JUST ONE QUESTION.

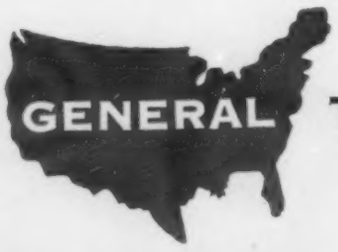
Did you measure the results of your current directory by simply comparing it with your previous issue? Unfortunately, most telephone companies are still following such a procedure.

The records we have compiled from publishing telephone directories which serve more than 4,000 Independent Telephone Exchanges have enabled us to establish positive standards by which we can measure the success of a telephone directory publishing job. Among the standards we have developed are: normal directory revenue per station; normal directory revenue per business account; normal directory revenue per advertiser; and, average number of advertisers per one hundred business accounts.

These established standards, when applied to your current directory, will show you whether or not it was as successful as it might be. And, it will be quite apparent whether or not we can increase your net profit from your directory.

Let us prove the validity of our claim. Send us a copy of your current directory and let us make a study of it without any cost or obligation whatsoever.

Mail us a copy today — you have everything to gain and nothing to lose!



GENERAL TELEPHONE DIRECTORY COMPANY

Publishers of Telephone Directories throughout the United States and the Territory of Alaska.

N. 108 Washington Spokane, Washington Telephone MAdison 8644	1415 Avenue M Lubbock, Texas Telephone 2-6330	185 North Wabash Avenue Chicago, Illinois Telephone STate 2-5478	604 Pine Avenue Long Beach, California Telephone 6-7221

To have a representative call, simply telephone collect or write to the nearest office listed above.

IN THE NATION'S CAPITAL

BY FRANCIS X. WELCH
WASHINGTON EDITOR

Provisions of new Defense Production Act reviewed. Only 17 states provide for commission regulation of co-ops. President Truman indicates electric utilities will be No. 1 whipping boy during political campaign. Communications Act amended.

CONGRESS made quite a few changes in the new Defense Production Act, which the President signed last week. It is important for all telephone utilities, as well as other lines of business, to note in just what respect the emergency controls have been altered for the 10 months' duration. First of all the new law extends emergency controls, which would otherwise have expired June 30, to May 1, 1953.

All four types of emergency controls will be theoretically extended although some of them don't amount to much in the emasculated form Congress inflicted upon them. These include (1) all material controls as now administered under the Defense Production Administration, the National Production Authority, and the special claimant agencies for utilities; (2) price controls, with a definite restriction on Office of Price Stabilization intervention in utility rate cases which do not involve wholesale service; (3) wage controls under the Wage Stabilization Board will be revised under a new board with limited jurisdiction; (4) credit controls will be continued only on payment for homes. The extension of rent controls may be terminated Sept. 30 in non-critical areas, unless continued by request of local communities.

The most important change, from the standpoint of public utilities, was the provision in the law dealing with the activity of the Office of Price Stabilization in utility rate cases. The House-approved version of the Defense Production Act of 1952 would have ended all OPS intervention in utility rate cases (including wholesale). The Senate-House Conference Committee, however, in the final draft of the bill retained the right of OPS to notice and intervention in wholesale utility service rate cases. This, in effect, places into the extended law the procedural policy which was suggested in a letter from ex-OPS Administrator DiSalle to Chairman Maybank of the Senate Banking and Currency Committee early this year. Congress has thus supported the position earlier taken by the OPS Public Utilities Branch (as distinguished from the OPS Legal Division and regional offices) that OPS should stay out of all utility rate cases not involving wholesale rates.

Specifically, the new law exempts, from OPS authority, all "Rates and charges by any common carrier or other public utility. . . . Provided, that no common carrier or other public utility shall at any time . . . make any increase in its charges for property or services sold by it for resale to the public, for which application is filed after the date of issuance . . . before the federal, state, or municipal authority, *if any*, having jurisdiction to consider such increase, unless it first gives 30 days' notice to the President, or such agency as he may designate, and consents to timely intervention by such agency before the federal, state, or municipal authority, if any, having jurisdiction to consider such increase: And provided further, *that the Office of Price Stabilization shall not intervene in any case involving increases in rates or charges proposed by any common carrier or other public utility except as provided in the preceding proviso. . . .*" (The underlined words were newly added to the law enacted this week.)

The foregoing newly added language has two definite objectives: (1) The addition of the words "if any" after the various regulatory authorities prevents OPS from claiming any rate control over utility services in those states or areas where there is no state public service commission jurisdiction or local regulatory control (such as Iowa or Texas for some utility services); (2) the definite instruction to OPS to stay out of non-wholesale utility rate cases, means that OPS can no longer get into telephone, transit, or other utility cases involving the retail distribution of gas, electricity, or water—even though the regulatory commission consents and is perfectly willing to allow OPS to intervene.

There will be a complete reorganization of the WSB this month under provisions of the newly enacted Defense Production Act. The old board of 18 members will continue in office until July 29, so as to provide an overlapping period during which the President may appoint members of a new WSB. These members must eventually be confirmed by the Senate.

The new board will be composed of members representing the general public, labor, and business. The President can determine the number and designate the chairman and vice chairman from among the public members. The jurisdiction of the new WSB will be confined to recommendations to the ESA Administrator on general policies and general regulations relating to prescribing maximum limits on wages, salaries, and other compensation.

What happens to all the WSB and Office of Salary Stabilization orders and regulations now in effect? Under the terms of the new law they will stay in effect until July 29. Then, they will automatically die with the old WSB, which goes out of existence on that day, unless the new WSB meanwhile adopts some of these regulations of the old WSB as its own.

Obviously some of the old WSB regulations cannot be adopted by the new WSB because they are beyond the jurisdiction of the new WSB, as limited by the new law. For example, the controversial steel wage order of the old WSB specified a union shop, which is a subject matter the new WSB could not pass upon. It would appear that all wage controls will be in a transitional period throughout July. During that

time the new WSB must pick and choose which of the old WSB orders it wants to carry on.

There will be no change in the setup of the Salary Stabilization Board or the OSS. In contrast with the changes in the WSB, the new act provides that salary stabilization shall be administered by the SSB as presently established within the Economic Stabilization Agency. One slight change in salary control policy, of interest to utilities, is an exemption of all professional engineers, architects, and accountants, employed in a professional capacity, from wage and salary controls.

New Control Provision

Adjustments approved last month by the WSB in a case involving the Michigan Bell Telephone Co. and the CIO Communications Workers of America have been designated by WSB as the basis for approval of comparable adjustments requested throughout the telephone industry. In its Resolution 97, the WSB authorized the approval of petitions from other telephone companies which request adjustments substantially following the Michigan pattern.

Main feature of the Michigan case involved wage increases resulting from the reclassification of towns. Such wage increases need not be set off against General Wage Regulation 6—which is the 10 per cent "catch up" formula for wage increases since January, 1950—or General Wage Regulation 8 (cost-of-living increases). The resolution also provides for the use of the cost-of-living index available on the expiration date of wage contracts, in computing cost-of-living increases.

In a temporary action to minimize disruption in suppliers' shipments, NPA issued Direction 1 to CMP (Controlled Materials Plan) Regulation 2, suspending inventory limitations on copper and aluminum. Emphasizing the temporary nature of the suspension, officials said the present action will be rescinded or modified as soon as the effects of the work stoppage in the steel industry on users of CMP materials have been reduced to a point where such action is warranted.

Regulation of Co-ops

In a recent article in this department, a statement was made about state commission regulation of telephone co-operatives which drew some comment from several quarters. Your correspondent stated that a majority of the states do not have commission regulation of telephone cooperatives. This ostensibly conflicted with a recent survey of telephone counsels showing that out of 10 states, which have adopted new legislation for the formation of telephone cooperatives, nine had included state commission regulation. Only one—Texas, where there is no regulation—failed to provide for commission control of the new telephone cooperatives.

This would seem to establish a trend, and probably does, as far as new legislation is concerned. But the fact remains that considering the regulatory laws of 48 states, only a minority, 17 to be exact, provide for commission regulation of either electric or telephone cooperatives. These states are as follows: Alabama, Arkansas, Delaware, Georgia, California, Indiana, Kansas, Kentucky, Maryland, Minnesota, Nebraska, New Jersey, South Dakota, Virginia, West Virginia, Wisconsin, and Wyoming.

Will There Be a Special Session?

If there were any doubt about President Truman's intention of making the electric utilities the number one whipping boy during the forthcoming campaign, his speech, last week, at the dedication of the Bull Shoals Dam in Arkansas should have cleared it up.

It is obvious the President intends to pitch his part of the campaign on the dominant note of electric power with the hope that the voters will forget about other things. Of course this strategy may not work out. A successful campaign issue has to have listeners as well as speakers.

President Truman seems to be engaging in a little of the look-over-here technique of the slight-of-hand performers, concentrating on a few cents a month which might technically be saved on the electric bill compared with the millions of dollars being stolen right and left by officials and favorites of a corrupt administration in office. It could be that a lot of people will not fall for the same old line. But it has worked pretty well in the past. The late President Roosevelt played the electric power theme pretty strong in four campaigns and President Truman hit it hard in 1948. Maybe there is still enough life in the old argument for one more campaign run.

On the other hand, it could be a Democratic campaign pitched predominantly on the relatively unimportant theme of how much people will pay for electric power and where they will get it, will fall pretty flat, in a year when so many more important things need to be discussed. And if President Truman is going to play it for all it is worth, it may happen that after the election he will say, in the words of old vaudeville comedians in describing a

(Please turn to page 46)

Seitz Cable Articles in Book Form Now Available from Telephony

It will be good news to telephone plant men that the series of 19 articles entitled "Cable Splicing" by Daniel Seitz, plant superintendent of the York (Pa.) Telephone & Telegraph Co., appearing in TELEPHONY over the past few years, has been published in an 80-page booklet.

The new booklet, which is the only cable book on the market, has been retitled "CABLE—Modern Methods of Fault Location, Installation and Splicing."

Publication of these articles under one cover resulted from the many requests for copies of the issues of TELEPHONY in which they were published. Our stock of these particular issues have been depleted.

Mr. Seitz' articles are written in the telephone man's language and are profusely illustrated by the use of 210 pictures and numerous tables. Telephone companies should obtain sufficient copies of the booklet to furnish every cableman with a personal copy and to use in training courses for learners.

The articles cover (1) the history of the development of cable; (2) composition and manufacture of cable; (3) modern methods of installing aerial, underground and building cable; (4) techniques and detailed instructions for splicing cable; (5) methods of locating and clearing cable trouble; (6) instruction for pressure testing of cable.

The booklet containing Mr. Seitz' articles may be purchased at the following low rates (Send orders to TELEPHONY Publishing Corp., 608 S. Dearborn St., Chicago 5, Ill.):

1 to 5 copies	$1.75 each
6 to 25 copies	1.60 each
26 to 50 copies	1.45 each
Over 50 copies	1.30 each

Please send remittance with orders.

Many Ways To Reduce Or Prevent Reported Trouble

By L. N. MARTIN
Virginia, Ill.

THOSE companies who have an adequate system of trouble records, such as we have advocated in this series of articles, will at all times know when their trouble is excessive or has an unfavorable trend. The next question is: "What can be done about it?" "How can trouble be reduced when it is too high?"—"How can it be prevented from becoming too high?"

We naturally think first of *Preventive Maintenance.* However there are other factors which may even precede formal or programmed preventive maintenance. Trouble prevention begins with the purchase of the right switchboard, telephone sets, and construction material. These items must not only be good but must be right for the particular uses to which they are to be put.

Installation of central office equipment, specifications used for outside plant, and the type of workmanship used in outside plant construction all have a part in securing a good trouble rating, or bringing about a poor trouble rating. The daily work of installing, moving, and removing telephones plays a very important part in determining how much reported trouble a company will have.

The way that reported trouble is cleared by the repairmen, switchboard men, or switchmen is also important. It is possible for a man to clear a case of trouble which has been assigned to him and yet leave the plant in worse condition than he found it. He may clear the case in such a way that it is almost certain to reoccur and he may overlook or actually create several cases of potential trouble. And this may not be entirely the fault of the workman. Does his supervisor encourage him to do a thorough job while he is there? Is he given time to do a good job and then to look around for other potential trouble within sight of where he is working?

Every physical activity of the plant department can either cause an increase or reduction in trouble. In the central office, even the way the floor is swept or the building ventilated can affect the trouble results. To reduce trouble, every member of the plant department must at all times be *trouble conscious.* On every job, no matter what it is, they must ask themselves: "How will this affect service?"

PART 16. The preceding article in this series appeared in the July 5 issue, p. 15.

The prevention and reduction of trouble is such a large subject that we hardly know where to begin. We hope, in due course, to cover many phases of the subject. In this article we will start with a few thoughts on *Preventive Maintenance.*

Preventive Maintenance means spotting potential trouble and deteriorating plant by means of tests or inspections or both, then correcting the bad conditions thus disclosed. Notice that it consists of two parts: (1) Finding the bad conditions, and (2) correcting them. It is the second part that accomplishes the purpose of the Preventive Maintenance program. And it is not enough to just plan to clear these bad conditions *sometime.* If the clearing is postponed until most of the cases have come in as reported trouble, the purpose of the Preventive Maintenance program is defeated and the time and money spent on tests and inspections is wasted.

There are some plant jobs that every company knows must be taken care of promptly. Reported trouble must be cleared within a few hours, and certainly the same day that it is reported, if at all possible. Telephones must be moved when the subscriber moves and orders for new telephones must be completed (if facilities are available) without delay in order to maintain good public relations. If there is any time left over it can be used for Preventive Maintenance.

How often have we heard a repairman or an installer call in at 4:15 or 4:30 o'clock and say: "I am caught up on my trouble (or installations). Have you any Preventive Maintenance work I can do before 5?" Now, it is a good plan to always have some small jobs lined up for such odds and ends of time but serious Preventive Maintenance just cannot be handled that way. Any one who has had practical experience in getting a program of work completed knows that a job that is to be done "when there is nothing else to do," *just does not get done.*

Preventive Maintenance is a major plant job and it must be made at least equal in rank to all other plant jobs. It must be scheduled and the schedule carried out as planned. The necessary man-hours must be provided and the cost budgeted. However, we believe that, in the long run, good Preventive Maintenance does not increase costs and often saves money. The plant must be maintained by some method and one of the most expensive ways is to wait until a case of trouble is reported and then repair only what was reported. Also, to let a plant deteriorate until complete rebuilding is necessary, or to neglect a switchboard until a new switchboard seems to be the only solution, is a very costly way to maintain a plant. On the other hand, it is possible to waste money on Preventive Maintenance. This work requires thoughtful planning; must be based on facts such as the trouble record, special tests, and careful inspections; and the work must be done in an efficient manner.

What if there just really is no time for Preventive Maintenance? In other words, the repairmen are busy all day, every day, clearing reported trouble, and the installers also have their hands full. If this condition is an actual fact and everything has been done to increase the efficiency of the force, then there is only one answer: *Increase the force,* at least temporarily. Then as the Preventive Maintenance begins to reduce the trouble, time will be available for more Preventive Maintenance, and ultimately the company can go back to the old force which can now take care of both the reported trouble and the Preventive Maintenance program.

What is a reasonable division of time between Preventive Maintenance and clearing reported trouble? We cannot give a definite answer as we can find no statistics on this subject. Also, it will naturally differ with the class of plant and with local conditions. In the central office a large majority of maintenance time is Preventive Maintenance. In our article on Switchboard Trouble (TELEPHONY, May 3, p. 19) we found that a certain board required about 16 man-hours per quarter for its

proper maintenance and that the trouble expectancy for the same period was one case. Now, even if we allow as much as one hour for clearing that one case of trouble it leaves a ratio of 15 hours on Preventive Maintenance to one hour on reported trouble. In another case we found that the ratio was 17:1. However, Preventive Maintenance is most effective in the central office. We would not expect to find such a high ratio in station equipment or outside plant.

In station equipment the ratio seems to be about 5:3, i.e. a repairman spends five hours on preventive maintenance work when he visits a station to three hours actually clearing reported trouble. Preventive Maintenance on station equipment is usually not carried out on a program basis, but when a man visits a station to clear a case of trouble he makes a complete inspection and places the entire installation in a first class condition while he is there. This work usually requires somewhat more time than it did to clear the trouble which was reported. In the outside plant, due to storm trouble and other weather trouble, the time spent on reported trouble may be equal to or greater than the time on preventive maintenance.

Undoubtedly some Preventive Maintenance was practiced from the very beginning of the telephone business for there have always been some workmen and some supervisors who, when they encounter a case of trouble, look for its *cause* and then reason that similar causes may exist throughout the plant and that they should be found and corrected before they cause trouble reports. And that is the basic idea of Preventive Maintenance.

However, it was sometime between 1910 and 1915 that we first heard of Preventive Maintenance in a big way. It was treated as a new and wonderful invention. Trouble had always been one of the biggest problems of the telephone business and here was something new that promised to conquer that problem. The big companies were enthusiastic about it. Top management took it up and detailed instructions or "routines" were written in general offices. Naturally some mistakes were made. We will give one example.

A general office wrote an instruction that the supervisory relays in all offices were to be "routined" once per month and the instruction then specified in detail how this was to be done. This was mistake number one. In some offices this should be done twice per month. In other offices twice per year would be right. In still other offices once per year would be sufficient. We now know that the *frequency* of any Preventive Maintenance routine is a matter to be determined locally after careful consideration is given to all the facts.

The detailed instructions for carrying out this routine usually specified every thing possible in the way of reconditioning. All the covers were first removed (another mistake) and the relays cleaned. This included cleaning the contacts with carbon tetrachloride. Armature travel and armature gap were adjusted to specifications and the springs were adjusted to the required tension. The electrical test came last (it should have been first) and the relay often did not meet the test, so all the adjustments had to be repeated. Also, by this time, the contacts which had been cleaned with tetrachloride were giving trouble and had to be cleaned again by some other method. This kind of Preventive Maintenance is very expensive and is ineffective. Let us compare it with a more modern method.

The electrical test (using a current flow test set) is made often enough to make sure that the supervisory relays are always in perfect condition, but the frequency of this test is determined for each office after reviewing the trouble record and the records of previous current flow tests. The electrical test is more exacting than any condition the relay will meet in service, so if the relay meets this test again and again and no trouble reports have been charged to the relay, what more could be expected? Why remove the cover from the relay and let some dust in? What if its mechanical adjustment is quite unorthodox? It is doing its job, is it not? What more do we want it to do?

On the other hand if the relay fails to meet the electrical test the cover is removed and the cause ascertained and corrected. If the adjustment is off, it should be given the standard adjustment. The relay should also be cleaned.

Carbon tetrachloride is an excellent solvent and will loosen dirt when nothing else will. However, it has some disadvantages. It evaporates very quickly and deposits the dirt which it holds in solution back on the contact. It requires great skill and a special technique to use tetrachloride properly. It is now regarded as a last resort and after it is used the contact must be burnished or cleaned by some other process.

When adjusting a relay one should always ask: How did this relay get out of adjustment? Has an adjustment screw secured by a lock nut changed its position? Has a spring changed its shape or its tension? These things happen, but very rarely. When a relay is found badly out of adjustment it is usually because the last man who worked on it left it that way.

Most relay trouble is caused by dirty contacts. This may also cause arcing at the contacts. This, in time, will cause burning and pitting.

Much relay trouble (strange as it may sound) is not in the relay. Trouble in other parts of the circuit may be incorrectly diagnosed as trouble in a certain relay. The relay may not operate due to a high resistance in the circuit. It may arc because of an open condenser elsewhere in the circuit.

We once had a case that had us puzzled for awhile. The supervisory relays (which were of the old gravity type) would fail to operate at times and cause trouble reports, even though the adjustment was carefully checked again and again and the relays met the electrical requirements. It was finally found that because of a change in traffic practices the relay was, under a certain condition, subjected to a reverse current from the toll board. This destroyed or reversed the residual magnetism of the relay core. The relay would recover after about 20 minutes of normal use but in that time it was often the cause of a trouble report. This particular case was cleared by replacing the relays with a newer type which did not have such a heavy magnetic circuit. There were other remedies that could have been applied, but this case shows how suspected relay trouble may not be in the relay at all.

Notice that throughout this discussion of Preventive Maintenance we have assumed that the company has good trouble records. Records which show at a glance what class of trouble is too high or has an upward trend; also, analyses which show the causes of excessive trouble. This is the *first* step. Without such records any Preventive Maintenance is just a "shot in the dark" and will probably be ineffective and a waste of money. (Trouble Records have been discussed in this series of articles starting with the July 7, 1951 issue of TELEPHONY.)

In a future article we expect to discuss the mechanics of setting up a Preventive Maintenance program that will at all times be up to date, practical and efficient.

V V

>> The Chamber of Commerce of the United States points out the unreliability of government estimates for government-built waterpower projects. They are always too small. The chamber found that of 31 project estimates submitted to Congress, actual completion costs trebled. The estimates were slightly more than a billon and a half, while the actual costs came to more than five and a quarter billion.

THE PLANT MAN'S *note book*

BY
RAY BLAIN
TECHNICAL
EDITOR

WE ARE IN RECEIPT of a letter from a reader who states in part as follows:

"The topography of our area, coupled with other determining factors, does not permit us to take full advantage of maximum limits in long span construction. In fact, we have found 240 feet to be the approximate maximum limit of satisfactory spanning. It appears to us, therefore, that the high tensile strength of new type wire should enable us to counterbalance the cost of extra poles by the use of smaller gauge wire. For instance, 14-gauge iron wire in the HTL-85 grade has practically the same strength as the No. 109 wire in the BB grade which should provide a reasonable protection against breakage on spans of 240 feet or less.

"New type transmitters and receivers should compensate for some of the loss in attenuation. Loop resistance will permit its use up to about 4 miles which would include a major portion of exchange wire mileage.

"For longer loops we propose .080 Copperweld line wire which has a breaking strength about equal to that of 0.109 HTL-85 iron wire and a loop resistance within the range of practically all of our exchange area limits.

"The use of these lighter gauge wires would, of course, permit substantial savings in the initial cost of the wire itself to which may be added other marked reductions in the 'in place' cost. We find, for instance, quite some saving in labor due to the ease of pulling in and sagging the lighter wire. Pony-size crossarms should give as much service under the weight of these lighter wires as may be expected of the standard crossarm supporting heavier wire. There is considerable difference in the unit price of the lighter crossarm as compared with the standard size. Shorter and less expensive braces may also be used. Then, there is a labor saving to be realized in placing these crossarms on standing poles. Finally, lighter weight wire suspended on lighter weight crossarms permits the use of smaller poles which reflects a further reduction in the overall cost of the pole, including not only the initial cost but also the handling and installation expense."

The exchange in question is located in a light-loading area where sleet storms are not considered a hazard. Our correspondent presents some new thoughts and if any of our readers has any ideas on this type of construction, we should be pleased to receive their comments.

• • •

Each year, the writer sends for a pair of lineman's gloves which are used in his work in the garden. This year, a neighbor noticed these gloves and consequently we were asked to place an order for several additional pairs. Then the wife wanted a pair which were supplied through the offices of the Saranac Glove Co., Littleton, N. H., who made a special pair in a small size.

A pair of these gloves will last an entire season and will outwear several pairs of the average lower-priced garden variety.

• • •

Recently, we learned of a case where it was claimed that the hot sun shining through a window and striking the protectors on a main frame caused the heat coils to operate.

We realize that the sun is extremely warm in some sections of the country, but we never thought it could get that hot.

• • •

In discussing the explosion-proof type storage batteries recently, one engineer made the statement that he doubted if any storage battery actually ever exploded.

This writer has definite proof to the contrary and knows from personal experience that storage batteries of the old type could and did actually explode. We saw this happen out in Omaha, Neb., back in the early twenties.

Several of the old BB-28 type Signal Corps portable batteries were on charge and gassing freely. Perhaps a spark from a loose connection on the charging lead ignited the gas as one cell exploded with a loud report and scattered the battery case separators and acid all around the room.

Since that time we have been in favor of the explosion-proof type battery even though this is the only time we have ever had first-hand knowledge of a cell exploding.

We *know* they can go bang!

• • •

It is claimed that people give advice so you can avoid the mistakes they made, thus enabling you to make the mistakes they would have made if they hadn't made the other mistakes instead.

• • •

Someone has said that there is no business which will not permit a man, who has the inclination, to give a little time every day to study.

• • •

In these days of reckless automobile drivers, it is always a pleasure to observe the average driver of telephone trucks. We always notice telephone trucks wherever we go and whether the driver is a youngster or an old timer nearing retirement. He is, in practically every case, driving carefully and religiously observing all traffic regulations.

This practice is certainly a good public relations builder for the telephone company in any community.

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In the issue of May 31, we invited our readers to send us their comments on the use of air conditioning in switchboard rooms. We are in receipt of a most instructive letter on this subject from Earle B. Blomeyer, vice president of the Southern Continental Telephone Co., Inc., Elizabethtown, Ky., which states in part as follows:

"We have air conditioned two of our

switchboard rooms, one during the early part of 1951 and the other during the early part of this year. So far, our experience has been most favorable and we are planning to carry out this air conditioning program in other offices as rapidly as possible.

"Early in 1951 we installed a packaged air conditioning unit in our switchboard room at Somerset, Ky., while we were installing an 11-position combination local and toll switchboard. This switchboard with its relays and a small room for use of the chief operator are all air conditioned by this unit, which has a capacity of three tons. The cost of operation has not proved excessive. Neither have we had any complaints from the operators who work in this room and, in fact, they have all been pleased with it. Actually, we have found operations during the summer months to be materially improved from an efficiency standpoint.

"At Glasgow, Ky., we constructed an entirely new building in connection with the installation of 1,500 lines of dial switching equipment and we air conditioned the entire building. We installed a large air conditioning unit in the basement to cool the operating room, operator's lounge and the commercial office. A three-ton package unit was installed to handle the equipment room. Two separate units were installed so that we could maintain a fairly constant temperature in the equipment room without having an uncomfortably low temperature in the operating rooms and commercial offices. Thus, with this arrangement, we can vary the temperature in the traffic and commercial offices while maintaining a fairly constant temperature in the equipment rooms.

"Again, in this office, we have found the operation of the air conditioning system to be reasonably economical considering the area that is cooled. We have also found that customers' reactions are very good in the commercial office and we would not consider the construction of a new telephone building without including complete air conditioning."

We are pleased to receive first-hand reports on air conditioning from people who have had practical experience in the field. This confirms our often-voiced belief that air conditioning is a good investment in any telephone exchange.

PLANT MAN'S QUIZ

Q. Is it considered desirable to make repairs to dials on the customer's premises?

A. There is no objection to making minor repairs to dials on the customer's premises; however, when a change of parts becomes necessary, it is our opinion that the dial should be replaced and the defective one returned to the shop for a complete overhaul. Contacts can be cleaned and adjusted, and the dial oiled on the job without difficulty.

• • •

Q. Please explain the recommended method of cleaning and oiling linemen's belts.

A. Opinions may differ on this subject, but, as a rule, the following procedure is considered satisfactory. First, remove all surface dirt with a cloth or sponge dampened with water. Gasoline should never be used for cleaning leather as it causes excessive drying. Then, clean the leather thoroughly by working up a good lather using the damp sponge and a neutral soap, such as castile or a good white toilet variety. Then thoroughly wash the belt with the lathered cloth or sponge to remove all dirt and wipe well with a dry cloth to remove excess moisture. Next, clean well with a good saddle soap.

Belts generally require oiling about every six months. While the leather is still damp after cleaning as described above, rub in about two teaspoonfuls of neatsfoot oil. Every effort should be made to effect an even distribution of the oil over the entire surface of the belt.

Never use mineral oils or grease such as machine oils or vaseline on a belt. The belt should never have a greasy or oily appearance as this is an indication that too much oil has been applied. When excess oil is used, the belt will stretch and pick up dirt and grit which may injure the leather. After oiling a belt, it should be stored in a cool place for about 24 hours to permit the leather to dry slowly. It should then be rubbed well with a clean dry cloth to remove all excess oil that may remain on the surface.

• • •

Q. When using a pole derrick, is it considered necessary to place jacks under the rear end of the construction truck body?

A. Modern construction trucks are, in general, equipped with derrick supports which are short, adjustable telescoping tubing supports that attach to the rear end of the truck body on both sides and may be set to reach the ground under all normal conditions. These supports are provided primarily to relieve the truck springs and the rear tires of any excess stress when a heavy load is to be lifted by the derrick. They also stabilize the unit by partially eliminating the spring-and-tire flexibility under a heavy load.

Due to the fact that these supports are located back of the rear wheels, a greater load may be lifted on the derrick without raising the front wheels of the truck. The use of these supports is recommended when a load is lifted by the derrick which will exceed one-eighth of the total weight of the truck and the load.

• • •

Q. When pulling in small aerial cables, we frequently find that unsightly kinks remain that cannot be removed by pulling at the splicing points. Will you please advise how this condition may be eliminated?

A. We suggest the use of an aerial cable guide. This may be purchased at a reasonable cost.

The aerial cable guide consists of a formed shoe for guiding the cable to its position under the strand and an adjustable angle iron insert which tends to straighten the cable as it passes between the angle and the shoe. This guide may be used on cable being supported by rings or by the spinner method.

• • •

Q. We would like you to explain the recommended method for an installer to handle a coil of drop wire to prevent tangling.

A. In our opinion, the best method to follow is to make use of a standard drop wire reel that can be procured from any telephone supply house. This type of reel can be used in either a vertical or a horizontal position or may be mounted on the side of an installation truck by the use of special mounting brackets. This reel is also equipped with an adjustable brake that is used to prevent overrunning and to control slack when pulling out wire.

When used by one installer in stringing a drop, the reel may be placed at the pole and pulled toward the house. After making the first attachment on the house, the wire may be terminated on the house.

V V

» Production per man is now five times what it was at the beginning of the century. The answer, says the Chamber of Commerce of the United States, is to be found largely in the increased use of machinery that speeds production. Such machinery requires heavy capital investment and such investment comes mainly out of earnings.

V V

» Tact has been explained as lying about others as you would have them lie about you.

THE OPERATOR'S Corner

BY
MAYME WORKMAN
TRAFFIC
EDITOR

IN THE LAST publication of "The Operator's Corner" we talked about the supervisor or service assistant's responsibility, and we shall now continue this subject.

An old-time supervisor never dreamed she would see the day when she would have a chair provided for her use to reduce fatigue when her duties did not require her presence on the floor directly back of the operators. She probably thought all supervisors would always be required to be on their feet, standing, or pacing up and down like a horse on a race track. Some supervisors had to go back to the board because they couldn't stand the strain. But patience and time solve many problems. Today, chairs are provided for supervisors as well as operators and they serve other purposes as well as reducing fatigue.

Where a chair is provided for the supervisor, a second chair is usually of frequent convenience for the use of an operator who has been relieved to receive instruction, and for the use of the chief operator and others who may have occasion to confer with the supervisor. The "chair privilege" can be abused where supervisors utilize them for personal conversation with an operator in their section presumably relieved for instruction.

In observing the work of an operator, ordinarily the length of time that an individual's work is under scrutiny should be of sufficient duration to make sure the characteristics of the operator's work are known and that she correctly applies any specific items upon which she has been instructed. If the supervisor's attention is required elsewhere during the time she is observing the work of an operator, she should resume her work with the individual as soon as conditions permit in order that the benefits of the work already done may not be wasted.

Experience has proved supervisors are able to follow more effectively the work of the operator when attention is directed to observing one or two specific service items at a time. It will be found helpful to anticipate mentally the operating step which should be taken with the correct practice. It may be desirable to make a few notes of the operator's work to assist the supervisor in her discussion with the operator. Extensive notes should be avoided.

Having observed those features of the operator's work which require attention, the next step is to ascertain the specific conditions which caused the irregularity, and whether or not it is within the control of the operator, so that proper corrective action may be determined.

In general, irregular operating work is due to one of the following reasons:

(a) Lack of knowledge.
(b) Engrossed in other details of work.
(c) Poor judgment.
(d) Improper operating habit.
(e) Lack of skill.
(f) Indifference or carelessness.

In determining the corrective action to be taken, it is important to take into consideration the personal characteristics of the operator and to be guided to a considerable extent by the knowledge of the operator's work and the conditions causing the irregular operating. Obviously the corrective action will vary in the case of an operator whose work is generally satisfactory and one who is careless or indifferent.

The corrective action may require drills or demonstrations at the switchboard if the condition noted seriously affects the service being given on a particular call, such as timing, for example. Ordinarily the supervisor will find it advantageous to instruct the operator away from the switchboard as soon after the occurrence as practicable while it is still fresh in the operator's mind.

The supervisor should bear in mind recognition of work that is good or shows improvement is equally as beneficial in contributing to the operator's progress as pointing out where improvement may be effected. It is also well to remember that instruction is most effective when brief and confined to a few of the most important features instead of attempting to cover a large number of minor or unimportant details.

In general, instruction at the switchboard is best limited to cases where the service on a particular call is being affected or when a condition can be indicated in a few words so as not to interfere with the operator's work. In individual cases where drills or classroom instruction appears necessary, the supervisor should refer the need to the chief operator.

More information on this subject will appear in the next publication of "The Operator's Corner."

Traffic Questions

(1) On the first attempt to reach the called telephone where through supervision is not received, if an answer has not been obtained at the end of one minute of ringing, and the operator receives a report of DA, what action should be taken?

(2) If the calling party indicates that he no longer wishes a long distance call, should the cancellation order be accepted without question?

(3) When a call is cancelled, has the practice of suggesting further attempts to complete the call be discontinued?

(4) On a carried forward call which the customer requested held for AG on the preceding day, should the ticket be held until you receive a request to try it?

(5) Are we still supposed to ask "Can he be reached at another telephone?" if the called party cannot be reached at the called telephone?

Answers are presented on page 43.

V V

>> Eighteen million investors own America's vast network of business and industry. If high taxes deprive these people of a fair return on their investment, there will be no new investments to create jobs, says the Chamber of Commerce of the United States which is working for less government spending and less taxes.

V V

>> Someone has said that a narrow mind and a wide mouth usually go together.

Good Idea But No Cash

Poker-Playing Tactics Built First Toll Lines

By W. S. POSTON

WHAT WOULD YOU DO, if you were in a poker game, with a darn good hand, but had no chips to bet? Would you toss in your hand to the tune of "So Long, It's Nice to Have Met Ya?" Try to borrow a stack of blues? Or just what would you do in a spot like that?

The more you ponder such a ticklish situation, the more you'll feel for the builders of America's first toll lines.

It happened in the early '80's. The short-of-chips dilemma had hit the young telephone industry in the Midwest slap dab in the face. Public interest suddenly veered from exchange chatter to something a little more exciting—talking out-of-town. First, the desire to jabber at a distance was only a whisper, but soon resounded into a shout and reverberated into a roar as newspaper editors along Main Street sounded off in the crusade for toll lines.

A tiny plexus of toll lines had connected a few cities in the East. But in the Midwest it wasn't so easy to tie towns together. Yet there was the urge to try. And this effort ushered in a most dramatic catch-as-catch-can struggle that led to one of the greatest gambles in all telephone history.

Building "extra-territorial" lines, as toll lines were then called, hinged on many "ifs." "Ifs" or no "ifs," telephone go-getters, income-starved, licked their chops, drooled profusely and looked longingly at the revenue the lines might bring. But they, too, like the embarrassed card player, had no money.

And this short of cash predicament raised the jack-pot question: Would toll service be a commodity for sale in the telephone business? In this poker game setting, the answer teetered precariously between "yes" and "no."

The gamble hung on the timely age-old question of who's going to pick up the tab. And furthermore, despite all the clamor for toll service, would the lines pay? Toll lines cost money and the money wasn't there.

There must be a way—why not pass the hat? No, no, not a handout. Pride scorned the hat-passing idea, but the thought hatched another. Why not let "John Citizen" in on a little secret; after all he's the chap wanting to talk —let him pick up the tab.

A good idea, but how to do it was the hitch. A few turns of the crank, and out came the answer—sell him coupons redeemable in messages. And he got a bargain, too—$10.00 toll for $7.50.

That's how the scheme worked. Did it pay? Let's take an actual example, a typical case among hundreds. Central Union (a former Bell operating company in Iowa, Illinois, Indiana and Ohio) built a line from Springfield to Girard, Ill. A few miles to the south, folks at Carlinville, jealous of their Girard neighbors, also wanted to talk to the capital city, so they bought coupons—in fact, $900 worth.

The company extended its Springfield-Girard line to Carlinville. It cost $1,395. Deducting the $900 cash from citizens, the immediate outlay was $495. Everybody was happy! The company got the line and the digger-uppers got toll service and a free "beef" when the line went haywire.

The plan didn't always work. But when it did, lazy dollars donned overalls and hustled to provide a much-needed public service. Coupons did a sure-fire advertising job and the introductions transformed prospects into customers.

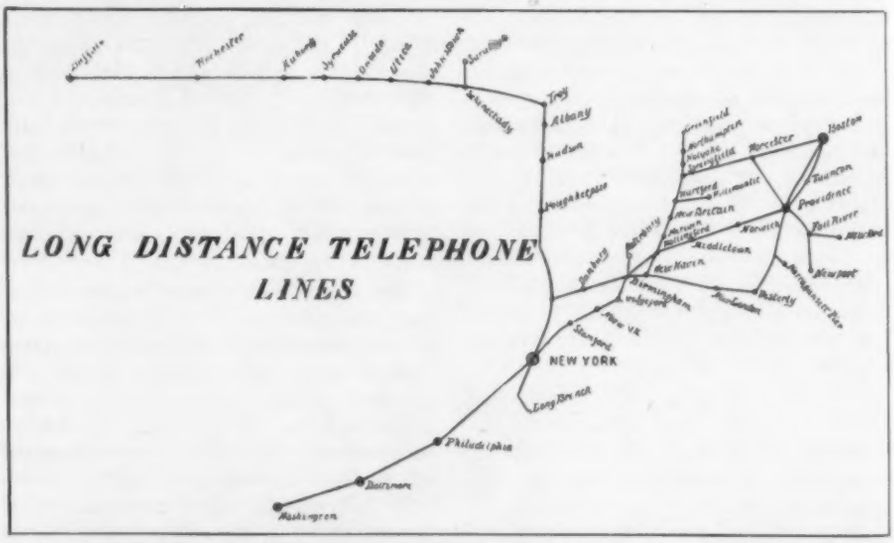
The idea owes its success to a handful of do-or-die telephone pioneers. Foremost among these early groundbreakers was W. S. Chapman, who incidentally helped introduce Midwest communities to their first telephone exchange service. He authored the scheme. First tried in Illinois, the plan soon spread and attracted many boosters. One of the most ardent was Chapman's friend and associate, A. S. Hibbard.

The topic was his baby when the National Telephone Association (which served in the industry in the earlier years in the same manner our present telephone associations do), held its September 9, 1885, session. Hibbard drove the thought home again and again: Coupons build toll lines and create customers. Its promotional worth Hibbard extolled "as being most seductive as a means of getting people into the habit of using toll lines."

Yes, the big idea proved an ace in the hole. True, at the time, costs were tied to 15-cent a dozen eggs, 18-cent porterhouse steaks and $10 suits. A mile of poles cost $80. And the robust dollar of the '80's carried a real wallop —a mile of strung wire was yours for a $20 bill. Despite all this, early toll lines had tough sledding—many had a habit of not making their keep.

So it's not surprising the decision-makers, sweating it out under the heavy load of unsolved problems, continued to play 'em close. They were so short on chips—they had to.

Of the many close-to-shore bets, here's one the boys in the saddle made time and time again. If you know your specs, you'll agree planting poles 17 to



In toll coupon days the nation's toll network was a provincial infant. By 1889 it had crept westward only as far as Buffalo, N. Y.

the mile is setting 'em few and far between. And that's exactly what they did too. With the cost chopped in half, they were still in the game. The small ante had kept the kitty alive.

After the draw the boys would slowly peel back their cards and take a peek. If the pendulous line stretched on the widely spaced poles were getting a good play, the shrewd players would match their original wager by setting 17 additional poles, thus filling in the lead to 34 to the mile.

All of this gives rise to speculation as to whether toll line builders of 70 years ago were gamblers. Or were they just playing a poor hand well? From the side-lines, it may have looked like the boys entrusted with the telephone job were taking a flyer on a bobtail flush or fillin' a straight in the middle. Or was it American ingenuity's way of getting things done?

We'll leave it up to you. But one bet for sure, dramatic gambles such as these sent the old miracle ball soaring on its way toward world-wide telephone service.

A. S. HIBBARD, early telephone pioneer, sold the toll coupon idea to his colleagues of the National Telephone Association in 1885.

REA Allocates $5,330,000 In 9 States; One Loan Rescinded

THE Rural Electrification Administration approved $5,330,000 in the week of June 23 to 28 to finance telephone service in rural areas in nine states.

During the week also, at the request of the borrower, REA rescinded an allocation of $563,000 approved in September, 1951, to the Copake (N. Y.) Telephone Co.

On June 23, Colfax (Cal.) Telephone Exchange, received a $120,000 loan allocation. The funds will be used to improve and expand existing rural service in Placer and Nevada counties.

Presently the company furnishes magneto service to 425 rural subscribers over 21 miles of line. With the REA loan, the borrower proposes to build five miles of new line, rebuild 15 miles of the existing line, install new dial central office equipment in Colfax, and add 149 new subscribers.

Completed, this telephone system will provide dial telephone service to 574 subscribers including nine switchers and one PBX subscriber.

* * *

Also on June 23, Ripley Farmers Cooperative Telephone Company, Carthage, Ind., was allocated $361,000. The funds will be used to improve and extend existing service in Rush, Shelby and Hancock counties.

This company is now operating 239 miles of line furnishing magneto service to 1,103 rural subscribers through central offices at Carthage and Morristown. With REA financing, the borrower plans to build six miles of new line, rebuild 134 miles of the existing line, convert the two central offices to dial operation, and add 153 new farm family subscribers. Service for subscribers without toll charge between the two central offices will be maintained. In addition, there will be no toll charge between the Carthage central office and the towns of Knightstown, Charlottesville, Mays and Arlington; and no toll for calls between the Morristown central office and the towns of Arlington, Shelbyville and Fountaintown. The applicant expects to be incorporated as a cooperative type of organization.

When the new construction and improvements made possible with the REA loan are completed, this system plans to operate 245 miles of line providing dial service for 1,256 rural homes and establishments.

* * *

Cherokee Telephone Cooperative, Mountain City, Tenn., on June 23 received a $327,000 loan allocation. The funds will be used to improve and expand service in Johnson and Carter counties in Tennessee, and Avery and Watauga counties in North Carolina.

As a basis for this system, the new cooperative plans to acquire the properties of the Banner Elk (N. C.) Telephone Co., now furnishing magneto service to 98 subscribers over 10 miles of line.

With the REA loan, the borrower proposes to build 172 miles of new line, rebuild all of the acquired line, convert the Banner Elk central office to dial operation, and install new dial equipment in Mountain City and Shady Valley, Tenn. As a result of the new construction and improvements, 672 new rural subscribers will receive dial telephone service. The Mountain City central office will serve only rural subscribers located outside of the city. Service without toll charge will be available between the subscribers of the Mountain City and Shady Valley central offices.

Completed, this telephone system plans to furnish dial telephone service to 770 rural subscribers over 182 miles of line.

* * * *

On June 26, Heins Telephone Co., Sanford, N. C., was allocated $985,000 which will be used to improve and expand rural telephone service in Lee, Harnett and Chatham counties.

The company now serves 2,515 subscribers over 58 miles of line through dial central offices at Jonesboro and Broadway, and a magneto central office at Sanford. With the REA loan, the borrower will be able to build 199 miles of new rural line, rebuild 36 miles of the existing line and add 1,642 additional subscribers. To take care of the total of 4,157 subscribers, the company plans to install new and expanded dial equipment in the Jonesboro and Broadway offices, convert the Sanford central office to dial operation, and add a new dial office at Olivia.

Service without toll charge will be available for the subscribers between the four central offices. Toll and operator assistance will be supplied by the Sanford office for the other three central offices of the company as well as for other companies in the area.

* * * *

Also on June 26, Humphreys County Telephone Co., Denver, Tenn., was granted a $148,000 loan allocation which will be used to expand and improve rural service in Humphreys County.

The borrower now furnishes magneto service to 160 subscribers over 20 miles of line. With the REA loan, the company plans to build 32 miles of new line, rebuild about 15 miles of the existing line, and install a new dial

central office on Highway 70 east of New Johnsonville. This new office will furnish improved service to the present subscribers and provide service to 365 additional rural subscribers now without telephones.

When the improvements and new construction provided for in this REA loan are completed, this system will be operating 52 miles of line serving 525 rural subscribers with dial telephones.

* * * *

On June 27, Pembroke (Ga.) Telephone Co. received an allocation of $106,000 for the expansion and improvement of service in rural areas in Bryan and Bulloch counties.

The company, now operating under a co-ownership and to be reorganized as a commercial corporation, now furnishes magneto service to 227 rural subscribers over 32 miles of line. With the REA loan, the borrower plans to build 45 miles of new line, rebuild all of the existing line, convert the magneto central office to dial operation, and furnish modern telephone service to 157 additional subscribers.

When the new construction and improvements made possible with this loan are completed, this company will be operating 77 miles of line providing modern dial service to 384 rural families and establishments.

* * * *

Franklin Farmers Cooperative Telephone Co., Farmington, Me., on June 27, was allocated $415,000 for the improvement and expansion of rural service in Franklin County.

The company now provides magneto service to 620 rural subscribers over 166 miles of line. The REA loan will permit the borrower to build 83 miles of new line, rebuild 162 miles of the existing line, install three new dial central offices and furnish service to 293 additional subscribers. The central offices will be located at Phillips and Strong, both north of Farmington, and New Sharon south of Farmington. Service without toll charge will be available between the Phillips and Strong central offices.

The improved and expanded system will furnish modern dial service to a total of 913 subscribers over 245 miles of line.

* * * *

Valley Rural Telephone Cooperative, Glasgow, Mont., on June 27 received a $280,000 loan allocation to provide rural service in Valley, Phillips and Roosevelt counties.

The newly organized cooperative plans to use the REA loan to build 402 miles of new line to bring telephone service for the first time to 354 rural subscribers. It will construct four new buildings to house dial central offices outside the city limits of Hinsdale, Glasgow, Nashua and Frazer. The new cooperative expects to incorporate soon under Montana laws.

* * * *

Also on June 27, Northeastern Montana Telephone Cooperative Association, Scobey, Mont., was granted a $1,987,000 loan allocation. The loan funds will be used to improve and expand rural service in Sheridan, Roosevelt, Daniels and Valley counties in Montana, and in Divide County, North Dakota.

As part of the nucleus for this system, the newly organized cooperative proposes to acquire the telephone properties of the five following companies now providing magneto and switcher service to 487 rural subscribers on 512 miles of line: Froid Farmers Telephone Co.; Westby Telephone Co.; Antelope Farmers Telephone Co.; Farmers & Merchants Telephone Co., Flaxville, all in Montana; and the Divide County Farmers Telephone Co., Fortuna and Ambrose, N. D.

The borrower plans to build 2,876 miles of new line, rebuild 273 miles of the acquired line, add 2,135 subscribers who are now without service, and construct 13 new dial central offices. They will be located at: Westby, Froid, Reserve, Dagmar, Outlook, Flaxville, Scobey, Peerless, Glentana, Poplar, Nashua, and Lustre, all in Montana; and Fortuna in North Dakota.

When the improvements and new construction made possible with this loan are completed, this cooperative telephone system will be operating 3,200 miles of line furnishing dial service to 2,622 rural subscribers.

* * * *

On June 28, The Home & Green Telephone Companies, Green, Kan., were allocated $327,000, which will be used to improve and expand rural service in Clay, Riley, Pottawattamie, Marshall and Washington counties.

The Home Telephone Co. of Randolph, Kan., and the Green Telephone Co., of Green, now operating as two separate companies, are furnishing service to 751 subscribers, including 90 switchers, over 285 miles of line. They plan to consolidate into one corporation.

With the REA loan, the new company will be able to build 67 miles of new line, rebuild 169 miles of existing line, convert the Randolph and Green central offices to dial operation, and provide service to 76 additional subscribers.

The improved and expanded system will furnish dial service to a total of 827 subscribers over 289 miles of line.

* * * *

Also on June 28, Merchants and Farmers Telephone Company, Beaverdam, Va., received $274,000 for the expansion and improvement of existing telephone facilities in rural areas of Hanover County.

The company now furnishes magneto service to 119 subscribers from 95 miles of line. With the REA loan, the borrower plans to build 136 miles of new line, rebuild 83 miles of the existing line, install new dial central offices at Beaverdam, Gum Tree and Montpelier. These improvements and the expansion will enable the company to bring dial telephone service to 546 additional rural families and establishments. Service without toll charge will be available for all subscribers between the three central offices.

Completed, this system will provide dial telephone service to a total of 665 rural subscribers over 220 miles of line.

V V

Heart Ailments May Be Diagnosed Over Telephone

Ailing human hearts can be diagnosed over long distance telephone by a heart specialist, under a new system announced on June 30.

The equipment was developed by three University of Nebraska College of Medicine staff members. They are Walter E. Rahm Jr., an engineer and assistant professor of experimental medicine; Dr. John L. Barmore, senior resident in anesthesiology, and Dr. F. Lowell Dunn, professor of internal medicine.

Electrocardiograms, the patterns traced by tiny electrical impulses produced when the heart beats, are converted to frequency-modulated signals and transmitted over telephone wires without distortion. At the receiving end they are recorded on magnetic tape. The signals, converted to sound or put on a radarscope or paper tape for direct viewing, tell the expert how healthy a heart is.

Small hospitals could telephone the heart records to medical centers having top heart specialists, it is reported.

V V

Commerce Group Elects Burton

Oscar Burton, vice president and general manager of the Gulf States Telephone Co., Tyler, Tex., recently was elected regional vice president of the East Texas Chamber of Commerce.

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Every wire of Bethlehem Form-Set strand is protected by a bethanized coating. This "armor" is clean, uniform zinc, 99.9 pct pure, applied electrolytically.

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The reason is Form-Set's preformed construction. In preformed strand, the wires have a permanent curl; you can even take the strand apart, and still the wires won't attempt to straighten out. Naturally, therefore, a cut leaves the strand smooth and trim, with no "bushy" ends.

How about price? Does Form-Set cost more than ordinary strand? So *little* more that you'll hardly notice the difference. Form-Set strand is a buy!

We'd like to give you details. We'd like to show you how nicely Form-Set handles; how easily it slips into fittings. Whenever you say, a Bethlehem man will be glad to call.

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Type 43 has no ringer; if ringer is required, use separate ringer box.

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MAINTENANCE TESTING EQUIPMENT

By JOHN A. BRACKEN

PERHAPS THE SIMPLEST form of a full-wave varistor is that known as the "single phase diamond" or "bridge" circuit shown in *Fig. 1*. Here four copper-oxide varistor units are connected in series in a closed loop similar to a Wheatstone Bridge. Each half of the loop comprises two varistor units connected in the same direction and so joined together that

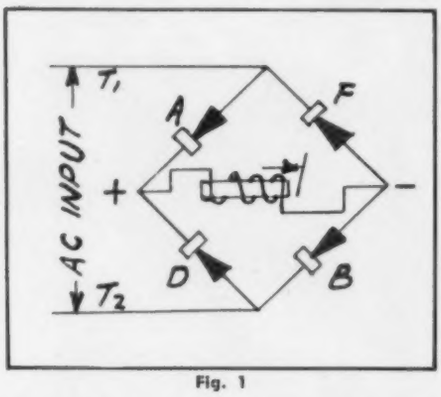

Fig. 1

the two halves of the loop are opposed to one another.

The junctions of like elements, shown at points + and — in *Fig. 1*, form the dc output terminals. When the ac input terminal "T1" is positive, the incoming current flows through the upper left varistor unit "A" to point +, through the relay to point —, and thence through the lower right varistor unit "B" to the ac input terminal "T2." Current is prevented from flowing in the opposite direction by the upper right unit, "F."

When the polarity reverses and the ac input terminal T2 becomes positive, the current flows through the lower left unit "D," through the relay and thence through the upper right unit F and back to the source at T1.

Each varistor unit permits current to flow through from copper-oxide to copper during alternate half cycles; full-wave rectified current results.

Figs. 2 and 3 represent a wiring diagram and detailed drawing, respectively, of the full-wave varistor arrangement shown in *Fig. 1*. The use of full-wave varistors covers a large field. It is often used to supply direct current instead of a battery. For example, included among the many service facilities furnished by a telephone company is a "key telephone system." This system is installed on the customer's premises and consists of switching keys, relays, etc., designed to connect

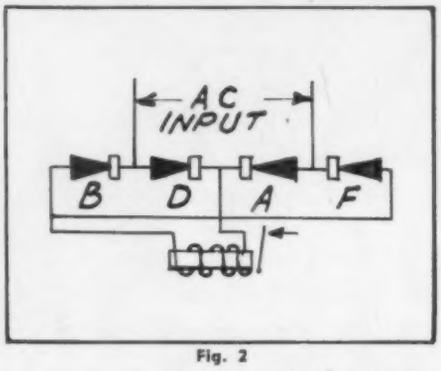

Fig. 2

and disconnect the telephone stations to the central office trunk circuits. The system is also for intercommunicating locally between stations.

PART 52. The preceding article in this series appeared in the June 21 issue, p. 24.

The key telephone system requires dc for operating relays, lamps, intercommunication, etc., all of which may be adequately supplied by means of a full-wave varistor and associated apparatus as in *Fig. 4*.

This equipment consists of four varistor units and a transformer T. One of the transformer's secondary windings is designed to produce about 6

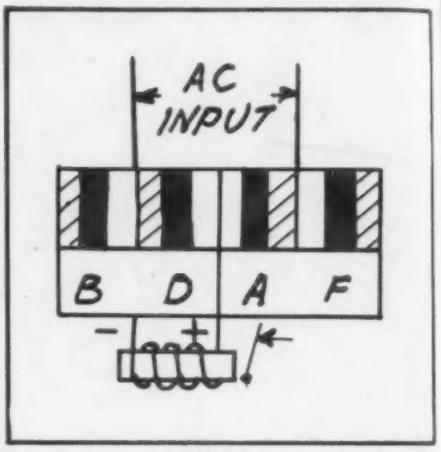

Fig. 3

volts ac to operate signaling buzzers. The other secondary winding is provided with taps designated "L," "M" and "H." It is plain that connecting the varistor between E and L uses the fewest secondary winding turns and thus gives the lowest secondary voltage. Connecting from E to M, or E to H gives successively greater numbers of secondary turns actually in use, thereby giving progressively higher secondary voltages. In this manner the varistor's dc output is regulated to required voltages.

(Please turn to page 34)

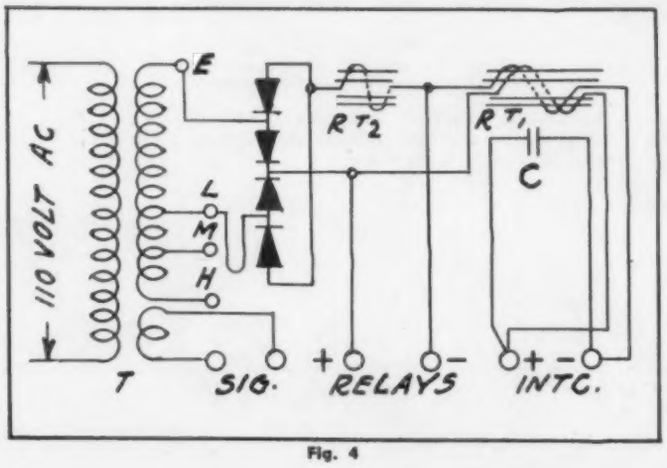

Fig. 4

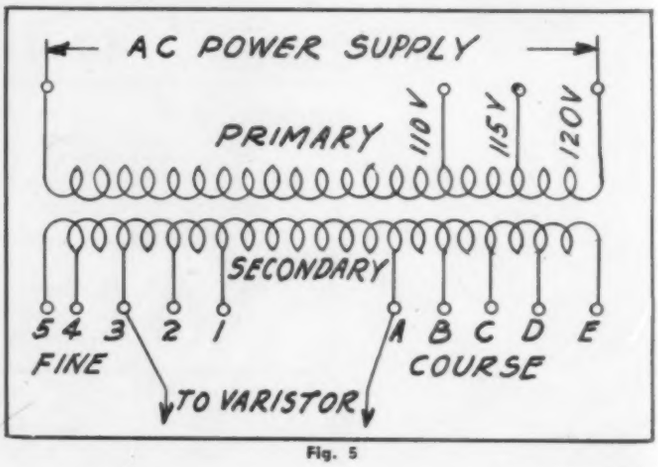

Fig. 5

To keep them on course...

and to bring them safely down

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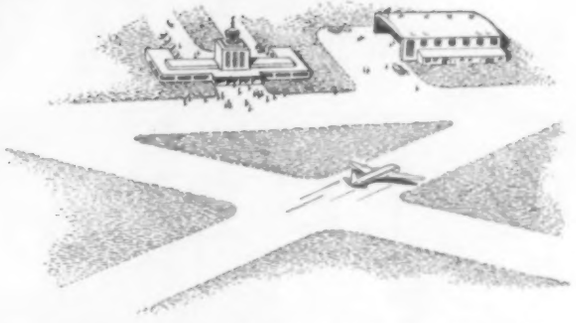

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a telephone's value?
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The value is often beyond measure.

BELL TELEPHONE SYSTEM

In addition to the varistors and transformer, there is a capacitor "C," fuses, and two retardation coils "Rt1" and "Rt2." The capacitor is connected across the "INTC" terminals, its purpose being to shunt out any objectionable disturbances in the talking circuit. The retardation coil Rt2 aids in smoothing out the rectified dc, and in preventing fluctuations in the rectified current frequency range from affecting the talking circuit. The retardation coil acts in preventing current fluctuations in the same manner that a heavy flywheel on an engine helps to keep the engine running at a uniform speed.

Rt1 has two separate equally balanced windings, one which is connected between the varistor dc output positive polarity and the INTC terminal marked +, and the other between the negative polarity and INTC minus terminal, thereby providing talking current of about 3 volts.

When the intercommunication circuit is used, all the stations involved are bridged across the dc output through the Rt1 retardation coil. However, this does not appreciably affect the transmission between stations because the retardation coil offers very high empedance to the voice frequency currents and low impedance to the dc which supplies the telephone transmitters.

A varistor transformer may be constructed with both the primary and secondary windings tapped so that a selection of voltage between the windings can be adjusted to almost any desired value.

Such an arrangement is represented in *Fig. 5*. Here the transformer primary winding is tapped so as to compensate for differences in the ac power supply voltage. The secondary winding has taps brought out from various points for the purpose of changing the voltage furnished to the varistor.

(To Be Continued.)

"See, when we install a telephone we're sure to make everyone happy."

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With the Doubl
and America
cook's type 53
interior junction b
Designed for use in P.B.X. inst
tions, in small unattended excha
and for the floor distribution of ca
in factories, offices and stores wi
screw connections for drop wires
desired—with *economy*. Woo
base; enameled metal cover. So
clips on Cable side; screw con
tions on drop side. Furnished i
and 26 pair capacity.
Mfd. by Cook Electric C
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aterials and Supplies . . .

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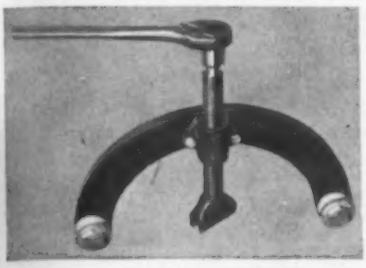
ratchet handle slack puller

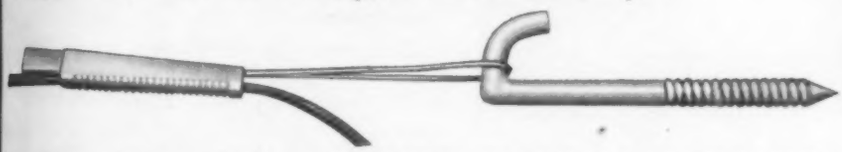
made by Cable Spinning Equipment Co.



The same dependable Slack Puller, but with a ratchet added. This type of handle enables the operator to pull slack with the Little Giant Slack Puller, requiring even less effort than would be needed with the conventional model.

The correct tool for those who use the Puller day after day.

reliable *drop wire clamps*



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TYPE "P"—for No. 17 parallel reinforced. Holds drop wires at moderate tensions, but concentrates pressure on small area under heavy loads.

TYPE "PS"—for No. 17 and 18. Particularly for smaller, weaker wires. Even under breaking loads the "PS" supports drop without damage.

Reliable Drop Wire Clamps are unique in that they:

1. Prolong life of drop wires by permitting free swinging at the support, placing all wear on the hardware.
2. Permit stringing and sagging of service drops before cutting wire.
3. Automatically tighten under load, assuring a firm grip without damaging insulation.
4. Eliminate sharp bends in wire.

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the aristocrat of stationary batteries

Many Planté batteries are still in active full-float service after twenty, thirty, even forty years! That's because Planté plates are heavy, solid sheets of pure lead. In these batteries Gould has eliminated the primary cause of self-discharge, capacity losses and shortened battery life. Cut maintenance, charging and replacement costs to a minimum. Choose Planté.

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GOULD-NATIONAL BATTERIES INC.

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EQUIPMENT AND ELECTRONIC CARILLONS • INDUSTRIAL, INTERCOMMUNICATION SYSTEMS • TELEVISION, RADIOS AND RADIO-PHONOGRAPH

Courts and Commissions

Georgia Commission O.K.'s Two Loans

Georgia Public Service Commission recently authorized two loans to Independents.

Chickamauga Telephone Co. was given authority to secure a loan of $60,000 from Chase National Bank of the City of New York. The loan is to be repaid at the rate of $800 monthly, Jan. 31, 1953, through Nov. 30, 1955, and $32,000 on Dec. 31, 1955. The proceeds of the loan will be used to retire present indebtedness and to expand further the telephone plant according to the company's application.

South Georgia Telephone Co., Inc., Ludowici, secured approval to amend its original loan application for $225,000 to $215,000. Chase National Bank is the lender and is to be paid back in $1,000 monthly installments, the remaining balance being payable on Jan. 15, 1955. The loan is to be used to repay present indebtedness, to convert and rehabilitate the Folkston and Ludowici exchanges and to improve other telephone plants.

V V

C&P of West Virginia Asks Review of Rate Case

Chesapeake & Potomac Telephone Co. of West Virginia has asked the Supreme Court of Appeals to review and set aside a May 16 order of the West Virginia Public Service Commission and direct the commission to grant the company "fair and adequate" telephone rates (TELEPHONY, May 31, p. 30).

In its petition to the court, the company reviewed in detail its case for rate relief and asserted that the commission had committed three fundamental errors in the May 16 order granting the company less than one-fourth of the amount of rate relief requested.

According to C&P the commission erred in:

(1) Its selection of a method of allocating the company's property, revenue and expenses between its interstate and intrastate operations.

(2) Not permitting the company to recover through its rates and charges the actual federal income taxes paid by it and for which it was legally liable.

(3) Its finding that the fair value of C&P property for the purpose of fixing rates and charges is $45,112,218.

V V

South Dakota Co-op Incorporates

First steps in the formal organization of a Valley Telephone Cooperative in South Dakota were taken recently when a nine-member board of directors was organized at a meeting in Mound City, S. D., and articles of incorporation were filed in Pierre by the cooperative's attorney, Robert Slocum of Mound City.

A meeting of the incorporators will be held in the near future to complete organization and adopt by-laws.

The cooperative hopes to have an engineer survey made in the near future.

Members of the newly formed board are Dave Wittmeier of Pollock; Joe Wolf of Herreid; Ted Molstad of Glenham; Henry Ochsner of Herreid; E. O. Tronson of Glenham; Art Thorsen of Pollock; John Kirschenman of Artas, and Sam Merkel of Glenham.

R. Kramlich of Mound City is treasurer and H. P. Ochsner of Herreid, secretary.

V V

Loan, Stock OK in New York

Ogden Telephone Co., Spencerport, N. Y., recently was authorized by New York Public Service Commission to borrow $165,000 to finance a construction program. The company was also given

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The Lindsay Telephone Supply Co.

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permission to issue 2,021 shares of common stock. The construction program calls for a new building in Spencerport and conversion to dial.

V V

Rate Reduction for SW Bell In Kansas Authorized

Southwestern Bell Telephone Co., has been granted permission to reduce rates $4,834 annually in Olathe, Independence, Salina, Leawood, and the Bethel zone of Kansas City, the Kansas Corporation Commission said recently.

The rate reductions will be made in fringe areas and where the city has expanded into rural areas, eliminating mileage charges to formerly outlying customers, the commission said.

V V

Northern Ohio Independent Asks $715,000 Raise

Northern Ohio Telephone Co., Bellevue, on July 1 filed with Ohio Public Utilities Commission an application to increase its rates for local service in all of its 64 exchanges.

The rates asked for would increase the company's gross revenue by $715,000 a year. Of this total increase, 55 per cent will be required for federal and state excise taxes and the company will retain only $321,750 as additional net income, W. C. Henry, president and general manager, who filed the application said.

V V

Grant OK to Pierce (Neb.) Company to Issue Stock

Authority recently was granted Pierce Telephone Co., Inc., by the Nebraska Railway Commission to issue a principal amount of $21,700 of 5 per cent preferred stock and further to issue $14,600 of additional stock, either preferred or common, with the limitation that not more than $10,900 of common stock could be issued. The commission also validated $39,100 of common stock already outstanding.

The company's articles of incorporation provide for a maximum capitalization of $100,000 of which $50,000 is prescribed as common stock and $50,000 as 5 per cent preferred stock, all with a par value of $100 per share.

The company had asked permission to establish an open-end authority so that additional new stock, of either class, in addition to the $39,100 of outstanding common stock, could be issued up to $75,400. The commission limited the amount of new common stock to $14,600 as noted above so that the amount provided in the articles of incorporation would not be exceeded.

On July 10, 1951, the applicant purchased the exchange which was then a

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Five year factory warranty

Model J-20

12¼" x 16¼" x 18"
Services 8,000 Cubic Ft.
Weight 55 lbs.

Don't let dampness rob your exchange of vital efficiency. The Oasis Air Drier removes up to 3 gallons of water from the air every 24 hours and that's a sure way to prevent dampness from causing operational trouble. Moisture damage can be expensive so why not eliminate it this sure easy way. Just plug the Oasis Air Drier into any A.C. 115 volt outlet. There are no messy chemicals to handle or damage your exchange or any particular damp room you choose to dehumidify.

Order your Oasis Air Drier today from Buckeye, your exchange or any room in which you use it will be dry in the dampest weather or location.

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BUCKEYE TELEPHONE & SUPPLY CO.

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manual magneto system valued at $32,493. Since then the system has been converted to common battery, and new telephones, a new switchboard, new cable, wire and poles have been installed. The present plant investment is $77,588.

V V

Approve Rate Increases for Four Minnesota Companies

Minnesota Railroad & Warehouse Commission recently granted approval to four Independents to raise their rates.

On June 12, Howato Telephone Co., Cokato, received authority to raise rates which were then producing operating revenues of $54,292 and net income of $15,016. New rates for Howard Lake and Cokato would raise operating revenues to $59,400 and net income to $15,407, a return of 5.87 per cent. When the Howard Lake exchange has been converted to dial, operating revenues would approximate $61,210 and net income $19,308, which on an original cost of plant would be a 5.96 per cent return. The company's two exchanges serve 1,261 stations.

Carver County Telephone Co., Norwood, received authority on June 13 to increase rates for its four existing exchanges (one more proposed). Operating revenues for the company are to rise from $117,360 to $131,149; net income from $23,481 to $24,037, which on original cost of plant of $441,980 is a 5.44 per cent return. Carver County company serves 2,637 stations.

Also on June 13, the commission approved increases for Hector Telephone Co. and its three exchanges. Operating revenues have been $51,588, and have netted $7,701. New manual rates are to produce operating revenues of $53,945 and net income of $8,756, or a return of 5.16 per cent on an original plant cost of $169,799. Estimated rates under planned dial operation would produce operating revenues of $60,563, net income of $15,206, and a net return of 4.58 per cent on a plant originally costing $331,479. The Hector company serves 536 local and 520 rural stations.

On June 20, the Minnesota commission granted Lake Crystal Telephone Co. authority to increase its rates. Operating revenues would be raised from $31,251 to $40,785. Net income would rise from $2,363 to $5,059, which on an original cost of plant of $103,794 would be a 4.87 per cent return. The company serves 532 local and 378 rural stations.

V V

North Carolina Bond Issue

Lee Telephone Co., Martinsville, Va., which operates at Madison, Stoneville, Walkertown and Walnut Cove, N. C., on July 3 asked the North Carolina Utilities Commission for permission to sell $500,000 of 3¾ per cent interest bearing bonds to finance new construction and improvements.

V V

Accounting Records Incomplete; Rate Increase Denied

Application for an increase in rates on all classes of service recently was denied the Campbell Telephone Co. by the Nebraska Railway Commission.

There was considerable deviation from the Uniform System of Accounts existing in the books and records of the company and for this reason a proper showing could not be made to prove the need for the increase requested.

The commission suggested the employment of an engineer to inventory and appraise the property but the company decided it could not do this and requested that the case be dismissed without prejudice. This was ordered by the commission.

The company is a corporation with a maximum capitalization of $9,000 provided in its articles of incorporation. At present there are 282 shares of capital stock outstanding with a par value of $25 per share.

V V

Mooresville (N. C.) Independent Applies for Rate Increase

Mooresville Telephone Co. on July 3 asked the North Carolina Utilities Commission for authority to increase its rates an estimated $15,000 a year to meet rising operating costs and carry the burden of its new expansion program.

The company serves approximately 1,300 subscribers. Its expansion program is being financed with $200,000 borrowed from the Durham Life Insurance Company of Raleigh, N. C.

The commission was told that the first $5,000 payment falls due next January.

In addition, the company said it wants to increase wages $4,000 a year and to provide compensation for members of the board of directors who now are serving without pay.

V V

Westerly, R. I., Company Gets Increase; 6.42% Return

The Connecticut Public Utilities Commission on July 3 granted a rate increase of $92,500 for Connecticut subscribers of the Westerly (R. I.) Automatic Telephone Co. (TELEPHONY, May 17, p. 32). The company serves a total of 7,000 stations, of which 1,727 are in Connecticut.

With the increase the company will have net earnings of $70,000 which will

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produce a rate of return of 6.42 per cent on its operations in Connecticut and a net rate base of $1,090,000. This compares with a return of 1.82 per cent before the rate increase.

V V

Pennsylvania Independent Markets Preferred Stock

West Branch Bell Telephone Co., Muncy, Pa., announced recently that shares of preferred stock are now being offered for sale at $52 per share, with a yield of 4.6 per cent. The Williamsport, Pa., investment firm of Blair, Rollins & Co., is handling the sales.

Currently, the company has about 5,000 telephones in use in its six exchanges at Muncy, Watsontown, Hughesville, Montgomery, Turbotville and Picture Rocks. It is now proceeding with a program for conversion to dial.

V V

Refuses Approval of Prompt Payment Discount Plan

Application to establish a prompt payment discount plan of 50 cents per month recently was denied the Arapahoe Telephone Co. by the Nebraska Railway Commission.

The company had requested the plan to improve collections from customers. The commission ruled, however, that the telephone industry generally had eliminated such plans almost entirely because of extra clerical work caused by the calculation of federal excise taxes on rates. It also causes disagreement between subscribers and management, the commission said.

V V

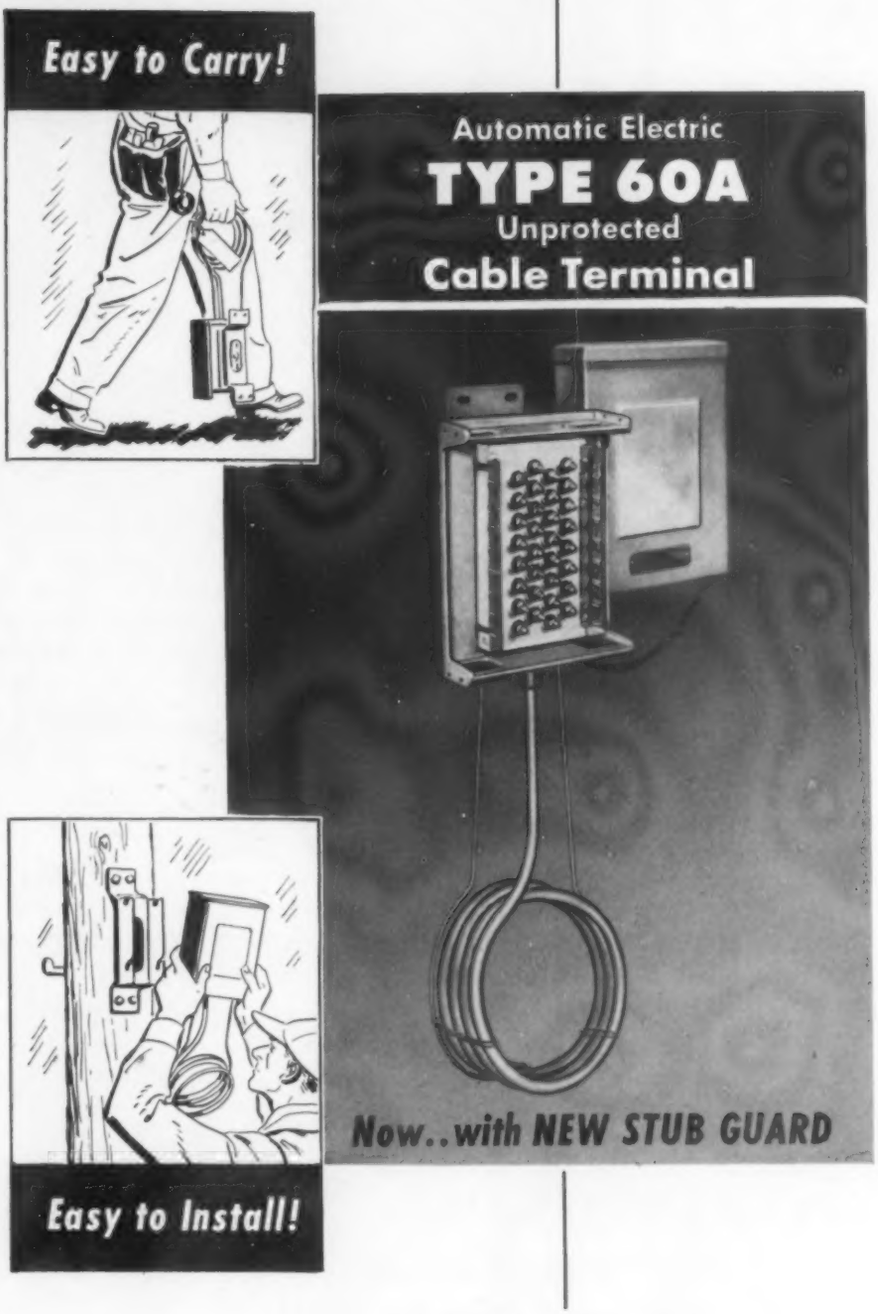
Minimum Wage of 75 Cents Set in Massachusetts

A compromise bill establishing a minimum wage of 75 cents an hour for intrastate workers not covered by special occupational orders issued by wage boards was given final passage by the Massachusetts Legislature on July 1 and sent to the governor for signature.

The new measure provides that wage boards may not set standards below 65 cents. The general minimum fixed by Massachusetts law heretofore has been 65 cents, with wage boards empowered to fix any minimum for various occupations.

A bill setting 75 cents as a flat minimum had been passed by the Massachusetts House, but this was revised in the state senate and the compromise measure was finally accepted by the house.

The enacted bill provides a number of exemptions, including employes of hospitals and charitable institutions,



You can carry Type 60A as easily as a pail—even swing it—yet you won't hurt the stub! A new, rigid stub guard takes the strain until terminal is mounted—can then be quickly removed. To install, all you do is fasten the detachable bracket to the pole with lag screws, hang the terminal on the bracket, and tighten four bolts. Moistureproof cable joint and terminals, heavy zinc cover, porcelain faceplate and rubber insulation insure trouble-free service. Save time, bother, repairs—order Type 60A today!

SA-51.....11-pair
SA-53.....16-pair
SA-55.....26-pair
} all furnished with 6' length of 24 ga. cable stub.

Product of the Telephone Specialty Department of

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persons regularly receiving tips, caddies, ushers, casual workers and others in the amusement industry.

V V

Wilcox (Neb.) Independent Gets Temporary Raise

A temporary increase of $1.00 per month on all classes of service, effective Aug. 1, was ordered for the Wilcox Telephone Co. by the Nebraska Railway Commission.

Operating revenues received by the company in 1951 totaled $6,329 against which were telephone operating expenses of $5,708. In addition, $406 were paid in taxes leaving a net profit for the year of $214. A net return of 2.12 per cent resulted.

The company proposes to rehabilitate its plant and to improve service. It has ordered $3,500 of new equipment including a rebuilt switchboard, cable, poles, wire and protection equipment. This it proposes to place in service at an early date.

In granting the increase, the commission ordered that the improvement program be carried out as soon as possible and that grounded service now furnished on some lines be converted to metallic. The company has until Dec. 31 to make a showing of satisfactory progress, and until July 1, 1953, to complete the program and establish permanent rates. Otherwise, rates revert to the present schedule.

Increases ordered:

	Present	Proposed
One-party business, metallic	2.75	3.75
One-party business, grounded	2.50	3.50
One-party residence, metallic	2.50	3.50
One-party residence, grounded	2.25	3.25
Rural metallic	2.00	3.00
Rural grounded	1.75	2.75
Residence party line, metallic	2.00	3.00
Residence party line, grounded	1.75	2.75

Rates are gross and include 25 cents prompt payment discount.

V V

Two Wisconsin Independents Get Rate Increases

Wisconsin Public Service Commission recently approved a $9,319 annual increase in rates for the Lemonweir Valley Telephone Co., New Lisbon.

The Hager City Telephone Co. also was given permission to put rates into effect that will yield additional annual revenue of $840. Hearings were set on applications from:

Poy Sippi Telephone Co. to increase rates, July 18; the Rusk County Rural Telephone Co., Ladysmith, application to sell out to the Wisconsin Telephone Co., July 16; and complaints of inadequate service from 42 subscribers of the Highland Telephone Co., July 17.

V V

Roys Named Director of NPA Communications Division

Everett C. Roys, Erie, Pa., on six months leave as chief engineer of General Telephone Company of Pennsylvania, has been named director of the Communications Equipment Division of the National Production Authority.

He has served as deputy director for the past few months. He succeeds William M. Day, on leave as vice president of the Michigan Bell Telephone Co., who has been named director of the NPA Mines and Minerals Bureau.

V V

Nine More Cities Added to TV Network by AT&T

Progress on the "stepped-up" schedule for the addition of 10 new cities to the Bell System's intercity network of television facilities was reported on July 1 by the Long Lines department of American Telephone & Telegraph Co.

Of the cities originally scheduled for service by July 7, two, Miami and New Orleans, received their first network programs on June 30. Seven more cities were connected at various times on July 1: Houston, San Antonio, Dallas, Ft. Worth, Oklahoma City, Tulsa, and Phoenix.

Seattle, Wash., the remaining city will probably be added on July 6, according to a company spokesman.

These additions by the Bell System will make network service available to 107 of the 108 TV stations in 65 cities throughout the United States via almost 30,000 miles of television channels.

V V

80th Lincoln T&T Exchange Cut Over to Dial

The Dorchester exchange of the Lincoln (Neb.) Telephone & Telegraph Co. was cut over to dial service on July 8. This brings the total of the company's dial-operated exchanges to 80 with 44 still manually operated.

Mrs. Ethelyn Jones, formerly chief operator, pulled the picks between contracts in the new dial switching equipment to complete the conversion and Mayor Miles Pospisil of Dorchester made the first call over the new equipment to K. L. Lawson, general commercial superintendent for LT&T at Lincoln.

New "325" Attachment . . . Derrick and Digger Unit

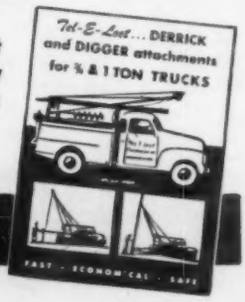
For 3/4 and 1-TON TRUCKS

Now your regular telephone service truck can be put to the added use of pole setting. Normally it will take two men less than ten minutes to set up the derrick, attach the digger, dig the hole and set the pole—all ready for tamping. It's all accomplished with the Model 325 Derrick and Digger Attachment, made to fit all service trucks as illustrated.

★ Answers the need for a two man construction crew

★ Sets poles up to 35'; takes augers 8" to 20" diameter

★ Packaged unit for installation by your local mechanic



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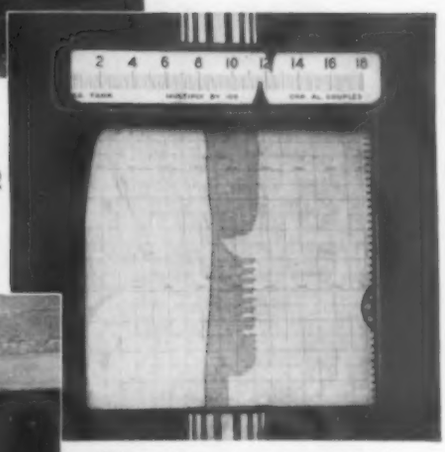

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2

3

Illustrations show some of the important factors in L-M hot dip galvanizing. (1) improved methods of degreasing, pickling, and washing to assure clean surface and perfect adhesion . . . (2) precise temperature controls to assure even coatings . . . (3) centrifuging removes excess zinc to assure clean threads.

● Good galvanizing, under controlled conditions, is the secret of the quality of L-M construction materials.

Pinholes in galvanizing invite rust. Uneven coatings wear through in spots. A coating that's too thick, or rough, makes nuts turn hard, slows down the lineman. So L-M takes all possible precautions to assure smooth, even coatings, that stop rust as long as possible.

For information about L-M equipment, ask the Kellogg man, or call the nearest of 87 Kellogg and L-M sales offices and warehouses throughout the country. Line Material Company, Milwaukee 1, Wisconsin (a McGraw Electric Company Division).

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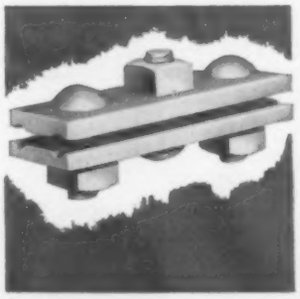

L-M Guy Clamp, with high-strength bolts and Torkol-treated nuts for easy tightening, firm holding, with no thread-corrosion. Heavy steel, hot-dip galvanized. Square holes keep bolt from turning.

Machine and Carriage Bolts have clean-cut threads, true heads, ample tensile strength. L-M bolts 6" and longer have buffer points for easy driving —in, and for driving out without battering threads.

Universal Messenger Hanger for minimum clearance between pole and conductor. Flared groove prevents nicking the strand and permits use of this hanger on both small angle and straight runs.

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Crowley Retires As Secretary Of Minnesota Association

J. C. Crowley Jr., dean of state telephone association secretaries and longtime leader in the Independent industry, on July 1 retired as secretary-treasurer of the Minnesota Telephone Association, after serving in that position for more than 30 years. He will continue to serve the association in a consulting capacity.

Mr. Crowley was succeeded by Keith W. Vogt, Lincoln, Neb., formerly chief accountant of the Nebraska Railway Commission (TELEPHONY, Feb. 23, p. 20).

Mr. Crowley devoted his early boyhood and entire business career to the telephone industry — completing 60

J. C. CROWLEY JR.

years of service on May 5 of this year, during which time he says he "never made a dime outside of the telephone business."

It is quite appropriate that he spent most of his life in the telephone business as he was born on Aug. 15, 1876, the year Alexander Graham Bell invented the telephone.

At the age of 15 years he began his telephone career when he got himself a job as water boy for $1.00 a day with the old Chicago (Ill.) Telephone Co. He was "led into" the telephone business by his father who was superintendent of the Chicago company when Crowley Jr. took on the job as water boy.

From his first telephone job, Mr. Crowley went on to laying conduit, cable splicing and installing. He began his telephone management career in 1898 when he became manager of the Eau Claire and Chippewa exchanges of the old Wisconsin Valley Telephone Co.

The following year he became associated with a contracting firm to supervise the construction of telephone plants in Duluth and Superior, Wis. In 1901 he became superintendent of the companies operating those exchanges. He remained in this position until 1922 when he moved to St. Paul to assume the secretaryship of the Minnesota Telephone Association.

KEITH W. VOGT, who on July 1 succeeded J. C. Crowley Jr. as secretary of the Minnesota Telephone Association. For the past six years he has been chief accountant of the Nebraska Railway Commission. Prior to that time he was in the auditing divisions of Burroughs Adding Machine Co., Northwestern Mutual Life Insurance Co., and Bank of America at San Francisco, Cal.

At that time the Minnesota association had as members less than 100 of the 400 Independent telephone companies operating in the state. Today there are 276 Independent companies and 210 belong to the association.

Commenting upon his retirement from the association and his future plans, Mr. Crowley stated in a recent letter to TELEPHONY:

"While I am retiring from the secretaryship of the association, my interests in some 12 different Minnesota companies will keep me interested in the telephone business for years to come.

"I have had a wonderful time and enjoyed every minute of the 60 years I have been in the business. When I hear some of the men complaining about problems today, I cast them aside, because I have had experience in the earlier days when problems were far more serious. I recall back in the days of buggies and hacks, hardly a day passed without an explosion in the Chicago loop district, tearing cable to pieces. Telephone men today can thank their stars that rubber tires have supplanted the horseshoes that traveled over the manholes in the early days."

V V

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YOUR POLES
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Small Texas Exchanges Form Corporation

A group of individual owners of various small telephone exchanges in north central Texas met on May 28 in Denton, Tex., for the purpose of organizing the North Central Texas Telephone Corp.

The object in forming the corporation is to enable the exchanges to establish sufficient equity to arrange financing for the modernization and expansion of their plants.

The Texas Telephone Association, of which J. B. Haley is executive secretary, has assisted in the formation of the North Central Texas Telephone Corp., and it will continue to consult with the company in arranging financing and planning its improvement program.

The following have been elected directors of the new company: L. R. Gross of Lake Dallas; Clarence Spradley of Haslet; Cecil Smith of Alvord, and R. H. Torrence of Boyd.

Officers are: Earl Nunneley of Decatur, president; R. E. Solomon of Valley View, and C. P. Owens of Rhome, vice presidents, and Jack Harmonson of Justin, secretary.

In connection with rural telephone service, the executive committee of the Texas Telephone Association, in a meeting on May 29, considered action to be taken to stop newly-formed REA telephone cooperatives from soliciting subscribers and building physical plants within the boundaries of existing commercial exchanges.

V V

Elected by National Carbon

P. M. Buhrer and C. O. Kleinsmith have been appointed executive vice presidents of National Carbon Co., a division of Union Carbide & Carbon Corp., according to an anouncement by A. S. Johnson, National Carbon's president.

Answers to Questions on Page 23

(1) The DA report should be accepted and the circuit cleared. The practice of ringing the called telephone for two minutes or asking the TTC operator to "Keep ringing" has been discontinued.

(2) Yes. The practice of suggesting further attempts to complete the call has been discontinued.

(3) Yes.

(4) Yes.

(5) It is no longer necessary to ask this question.

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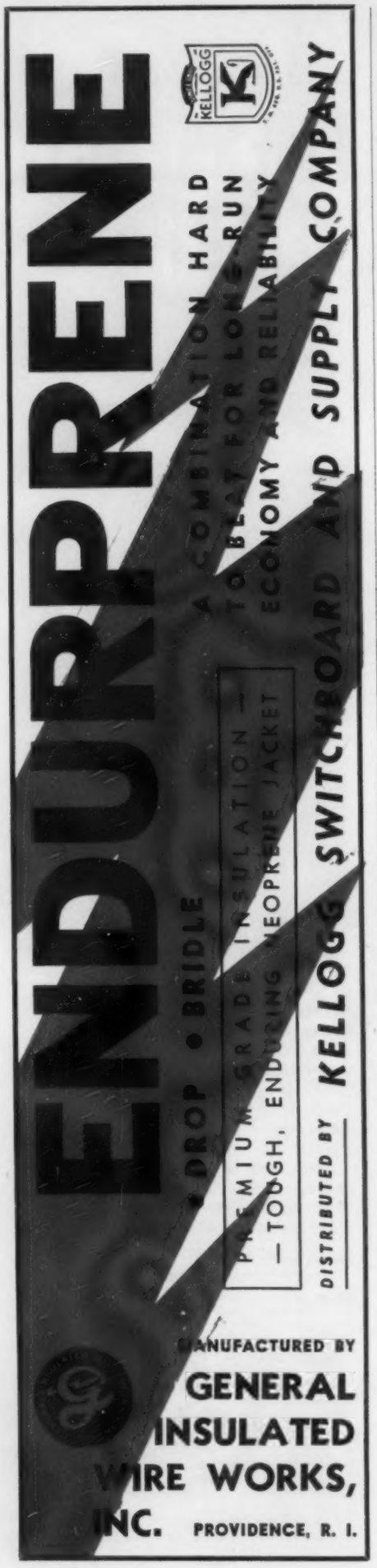

Foreign News

(From TELEPHONY's Pakistan correspondent.) From July 1, Britons must pay more for their telephones. Rental for a business telephone in London has gone up from £8. 7s. 4d. to £11 a year (about $30.70); private residence telephones from £5. 19s. 7d. to £8 (about $22.32). All this is necessary, says the Postoffice, because of rising costs. However, government departments do not have to pay anything for their service, and nearly one telephone in five throughout the country is used by the government. Every year the ministries make more than 20 million toll calls and nearly 100 million local calls. "Are all these calls really necessary?" asks the British public.

* * * *

The Baluchistan States (Pakistan) Union is planning to establish six wireless stations throughout the union. A request in this connection has been made to the Pakistan government. The wireless stations will be located at Kalat, Mastung, Turb, Pasni, Las Bela and Khitan.

* * * *

Two more technical experts have arrived in Karachi, Pakistan, under the UN's (United Nations) program of technical assistance. They were H. M. Philips, Great Britain, and G. Louis Weller, Washington, D. C. They went at the request of the Pakistan government to assist in improving the telephone systems in Pakistan, particularly in the capital. The two experts, who are scheduled to spend a year in Pakistan, will also assist in improving telecommunications between the two wings of Pakistan.

Mr. Philips has been a British general postoffice telephone engineer for the last 22 years and Mr. Weller has been in the telephone consulting business in the United States for many years.

* * * *

Rawalpindi will shortly have Pakistan's best designed modern building to house a new telephone exchange.

Also, the construction of a building for housing a new telephone exchange has been completed in Quetta. The construction of the building cost 20,000 rupees (about $6,000). Latest machinery has reached Quetta from abroad and installation is to commence in July. A building is also under construction in Chamman, Pakistan, for housing a new telephone exchange.

* * * *

A scheme for linking Baluchistan directly with the northwest frontier and the Punjabi is also under consideration by the government of Pakistan. The direct link will be via Fort Sandeman. At present Baluchistan is connected with the rest of the country via Kotri. Some preliminary survey work has been done at Fort Sandeman.

V V

Osborne Retires from AT&T; Romnes, Jacobson Promoted

Dr. Harold S. Osborne, internationally known communications engineer, retires on Aug. 1 as chief engineer of American Telephone & Telegraph Company, according to an announcement made on June 26. H. I. Romnes, now director of operations for the Long Lines department, will succeed Dr. Osborne as AT&T chief engineer. A. F. Jacobson, vice president in charge of operations for the Illinois Bell Telephone Co., succeeds Romnes in the Long Lines post.

Dr. Osborne, whose Bell System career spans 42 years, has been identified with all the major developments behind today's telephone service and has had long range plans for the future. He has also worked with the American Institute of Electrical Engineers (AIEE) and the American Standards Association (ASA).

Dr. Osborne joined the Bell System in 1910, after completing graduate work at the Massachusetts Institute of Technology. His early years in the business were spent on problems of transmission and protection. He was appointed plant engineer in 1940 and in 1943 became chief engineer of the company. He has written widely on engineering subjects related to the telephone and other communication services, and on city planning.

A long-time resident of Montclair, N. J., Dr. Osborne was active in organizing the town planning board and now serves as commissioner of public works. He has also been active in regional planning commissions, and since 1945 has been a director of the American Planning and Civic Association.

During World War II he served as consultant to several government agencies and has, since 1951, been a member of the Domestic Communications Industry Advisory Committee to NPA. Among other offices held by Dr. Osborne are those of president of AIEE, vice president of ASA and president of the U. S. National Committee of the International Electrotechnical Commission.

Romnes is a native of Stoughton, Wis., and a graduate of the University of Wisconsin. He started telephone work as an installer in 1927 and later

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worked in the Bell Telephone Laboratories and the engineering department of the AT&T. In 1950 he was appointed director of operations for Long Lines. His home is in Chatham, N. J.

Jacobson began his telephone career as a clerk in his home city of Omaha in 1922. He attended the University of Nebraska and after positions with Northwestern Bell Telephone Co. in Nebraska and Minnesota, he was elected vice president in charge of operations in 1949. A year later he was elected to the operating vice presidency of Illinois Bell.

V V

Nine Illinois Bell Employes Receive Vail Awards

Nine Chicago employes of Illinois Bell Telephone Co.—five women and four men—on June 26 received the Bell System's annual Vail Awards for helping to save the lives of six Chicagoans.

The awards, for noteworthy public service, were presented by President William V. Kahler and General Manager Blaine Cummings.

Mrs. Sophie L. Schafer, a supervisor, and Miss Amelia C. Lepunski, an operator, were credited with saving the life of a 10-month old baby girl seized by convulsions. Miss Lepunski summoned a pulmotor and doctor, while Mrs. Schafer, after making certain that the symptoms were those of convulsions, instructed the mother to bathe the baby in warm water, massage its body; then wrap the child in blankets.

Supervisor Agnes M. O'Brien also was cited for instructing a mother how to treat a baby for convulsions. Frederick J. Engel, installer, used his training in artificial respiration to revive a 16-year-old girl overcome by gas. Mrs. Ethel Prescott, assistant chief operator, succeeded in arousing another gas victim enough to obtain her telephone number, trace the number and rush aid to the stricken woman in time to save her life.

Victor S. Schumacher, senior plant assigner, applied tourniquets and assisted a doctor in treating a man whose legs were severed by a moving train. Lawrence M. Kakuska, repairman, was unable to get into a house where a routine report of telephone trouble was reported. Sensing that something was wrong, Kakuska tried to gain entrance, then, when the family's young son arrived home forced his way into the house to find the mother unconscious from insulin shock. He summoned aid and the woman was saved.

Mrs. Mayrose Sweeney, operator, and James F. Nolan, a collector, were cited for their attempts to save victims of heart attacks.

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In the Nation's Capital

(Concluded from page 18)

cold audience, "I put it over, but it laid there."

One thing President Truman said in his Bull Shoals Dam dedication speech started Washington observers wondering whether he plans to call Congress back for a special session. With Congress driving hard for a preconvention adjournment over the July 4 week end, such a measure could hardly have been sent to Capital Hill with any serious expectation of legislative consideration.

This announcement recalls, however, President Truman's 1948 campaign maneuvering in calling Congress back for a special session. The only alternative interpretations would be either a sudden decision to run for re-election or sending his Water Resources Policy Commission (WRPC) recommendation in a somewhat futile "swan song" message next January, just prior to leaving office.

The Truman speech showed very clearly the anti-utility tone which he expects to take during the campaign. He berated the private power companies without restraint. He identified them with "the forces of reaction and selfishness." He accused them of wanting to make the farmers pay more for their electricity. "It is as simple and as shocking as that," he said. He called socialism "a lying slogan" used by the private power companies as well as by the American Medical Association and the real estate interests to obstruct Fair Deal measures.

In an open plea for southern support, he reminded his listeners that the New Deal and Fair Deal had done more for the South than any other part of the country. "Remember these things this year, when you see and hear the storm of political propaganda that will be put out to try and turn back the clock."

The President's reference to the WRPC report indicates that he intends to press the power issue in other areas of the country during the campaign. This report suggested as many as 15 basin authorities covering every major watershed in the nation.

While Truman does not, of course, expect Congress to take action on such broad controversial recommendations, it is apparent that he is seeking to make a record upon which to campaign. Hence the conclusion that Truman, at least, is preparing to make public power the number one campaign issue in every state in the Union. He said, "no matter what the private power companies do or say, if I have my way about it, we are going right ahead to develop our water resources all over this country.

Communications Act Amended

In an 11th hour spurt Congress finally got around to amending the Federal Communication Act. It is a watered down version of various bills on the subject, which had been kicked around Congress for more than 10 years—going back to the old White Bill. The bill approved had to do mostly with radio and television license procedure. There were no changes directly affecting telephone companies.

Senate-House conferees rejected a proposal to exempt radio and television stations from libel suits for defamatory or slanderous remarks by political candidates.

Also dropped was a provision that the FCC could not discriminate against a newspaper publisher in granting radio or television licenses. The action came as conferees agreed on a compromise version of a bill to streamline and modernize FCC procedures.

Sen. Ernest W. McFarland (D., Ariz.) said the libel exemption, inserted on the House floor, was dropped in conference because no hearings had been held on it and the conferees felt the matter needed more study. He said the House provision banning discrimination against newspaper publishers was dropped because there was no need for it. "They aren't being discriminated against now," McFarland said, "and we felt that if you put one industry in, you'd have to put them all in." He added that it would subject the FCC to suits seeking to force issuance of radio-television licenses to newspaper owners.

However the conferees approved a provision that broadcast stations may charge political candidates only the amount charged for comparable time for other uses. The bill as approved by the House said political rates could not exceed "minimum" charges for comparable use of the air. The libel provisions scuttled by the conferees would have exempted stations from responsibility for remarks made by candidates using their facilities—unless the station "wilfully" aided the slander.

Under present policy, stations may not censor a candidate's remarks, but are held responsible for any libelous or slanderous things he says.

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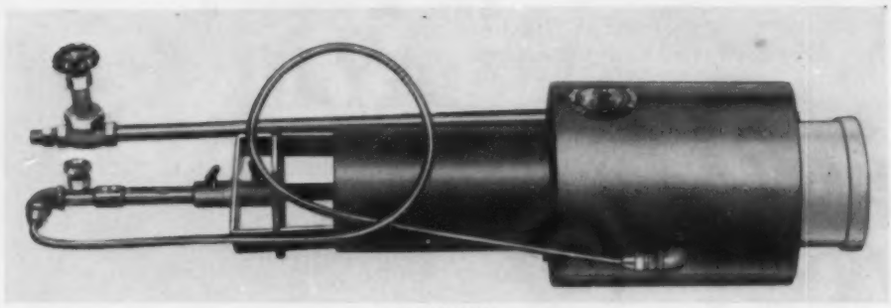
Mutual Announces New Propane Burner

Designed with a capacity to meet a wide range of medium and heavy duty industrial uses, a new butane-propane liquid vaporizer burner is being featured by Mutual Liquid Gas Equipment Co. (See cuts.)

Model LVB2



Model LVB6

"The new model (LVB2 with two-inch burner head, and LVB6 with six-inch burner head) is outstandingly efficient because of its exceptional ease of handling and maneuverability, a feature which means worthwhile savings in time and manpower," the company states.

The LVB burner, which has no moving parts, utilizes liquid gas direct from the tank. It is a "self-generating liquid vaporizer burner." A needle valve controls the gas, which passes into a jacketed chamber enclosing the burner, where it is pre-heated and vaporized, and then to a gas-air mixer within the burner. No additional vaporizer is required.

The LVB2 has a rated capacity of 280,000 BTU per hour, weighs seven pounds, and measures 25 inches, but may be obtained in any desired length. The LVB6 can deliver up to 3,500,000 BTU per hour, weighs 65 pounds, and measures 36 inches overall. The company suggests that those interested in ordering or getting further information should state the nature of the work involved, maximum BTU output required, and whether butane or propane will be used.

The new burner is available at Mutual Liquid Gas Equipment Co., 3600 W. Imperial Highway, Inglewood, Cal.

V V

Clay Manager at Lufkin, Tex.

Marion Clay, formerly sales representative of Stromberg-Carlson Co., has been appointed general manager of the Lufkin (Tex.) Telephone Co., succeeding Jean Shotwell, who recently resigned. Mr. Shotwell also resigned his position as treasurer of the Texas Telephone Association, in which he has served for many years.

V V

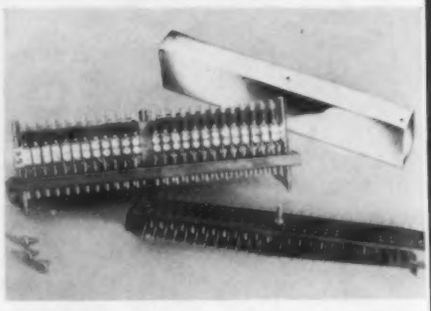
» It has been said that people in this country are being divided into two classes—those who work for the government, and those who work for those who work for the government.

V V

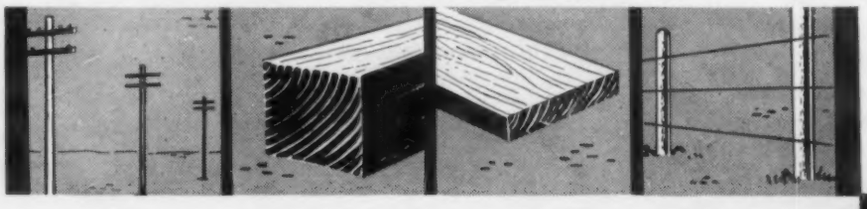
Central Office Protector Patented By Cook

Cook Electric Co. has just been granted a U.S. patent on a self-restoring central office protector. This protector embodies principles designed especially to reduce maintenance expense, and the time circuits are out of use due to electrical disturbances (see cuts).

The protector is constructed on opposite sides of a metal mounting plate in somewhat the usual manner, but the terminals are so arranged that they plug in directly on the main frame terminal block. Features embodied in this protector are:



Lightning protection. Lightning protection from the line terminal to ground is provided through tungsten contacts. This gap is further protected with a fixed secondary gap which is



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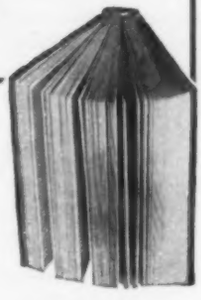

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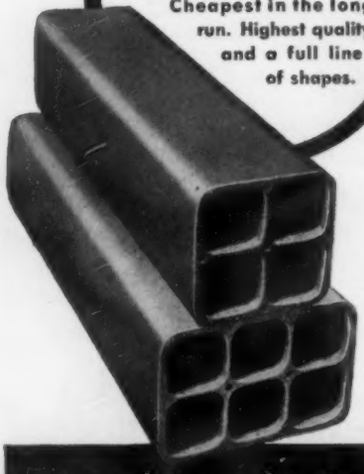

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set for any desired breakdown voltage.

Power circuit protection. An arc from a power cross would appear across the tungsten contacts, and the heat developed from the arc would promptly move the contacts together, this directly grounding the power current. As soon as this power flow ceases, the protector would return to its normal operating position without manual attention. The circuits through the protector from outside line to switchboard are entirely free of mechanical contacts. This provides a continuous electrical path.

Sneak current protection. Sneak current protection is provided by a low-resistance coil wound on a flexible member. This low resistance coil has the same electrical characteristics as a conventional telephone heat coil, so under an abnormal flow of current the flexible member warps over, bringing the two tungsten contacts together, thereby directly grounding the line. This ground is maintained as long as the abnormal current flows, but when it ceases, the flexible member returns to its normal position, removing the ground from the line.

Temperature compensation. The flexible members, which function due to abnormal temperatures, are made of bi-metal and, therefore, their position is dependent on their temperature. In order to cancel the effect of the varying ambient temperature, two bi-metallic members are employed in such a manner that they compensate for any change in ambient temperature but remain responsive to temperatures generated by excessive currents or arcs.

Sealed unit. All of the operating parts of the protector are provided with a heavy metal cover. This cover may also be made of transparent material to facilitate routine inspection.

Hermetically sealed. The tight fitting cover allows the unit to be hermetically sealed, after which it is filled with an inert gas to remove all deleterious corrosive effects of active gases such as oxygen. This sealing effectively eliminates all difficulties from fungus atmospheric moisture and dirt.

Alarm circuit. No alarm circuit is provided because the unit is self-restoring and, therefore, does not require manual attention.

Plug-in features. The plug-in feature allows the replacement of the entire protector bank without unsoldering any line or switchboard wires in case of a major burnout or other trouble. Service can be restored almost instantly by merely unplugging the unit in trouble and plugging in the replacement unit.

Unattended exchanges. This protector is ideal for unattended exchanges because of its self-restoring features, thus eliminating many long maintenance trips which would otherwise be encountered. Also, where unattended exchanges are mounted in poorly ventilated enclosures, the hermetic sealing of this unit prevents any damage arising from excessive humidity or other abnormal environmental conditions.

Space and weight saving. This protector and terminal is extremely compact due to combining the protector part and the terminal strip in plug-in relationship to each other. The terminal block and protector measure is 9½ by 2½ by 3½ inches and weighs only two pounds three ounces.

Molded bakelite. The terminal blocks and protector base are molded from high impact bakelite; this assures adequate strength and complete rigidity of these parts.

Military service. Due to the ruggedness, compactness and hermetic sealing of this protector, it is ideal for military service, mobile equipment, or in any place where environmental conditions create more than normal hazards.

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Stromberg Announces Promotion Of Two Telephone Engineers

The promotion of two Stromberg-Carlson telephone engineers has been announced recently by T. C. Thompson, telephone sales manager. William J. Riley, formerly of the national sales engineering department, will take over the duties of Marion A. Clay who has

W. J. RILEY

left the company's Kansas City branch office where he was sales engineer. Riley will report directly to A. B. Preble, branch manager of this office. Grant G. Orman has been transferred from the telephone engineering department to the national sales engineering department, replacing Riley, and is now reporting to R. O. Hoffman.

Riley joined the telephone engineering department of Stromberg-Carlson in 1948, but his actual telephone expe-

G. G. ORMAN

rience dates back to 1942, when he served in the U. S. Army Signal Corps as an instructor in wire communications. Riley took his formal education in electrical engineering at the University of Rochester and Princeton University.

Orman has been with Stromberg-Carlson continuously since 1942, except for a three-year interruption when he served with the U. S. Air Force. Designing automatic testing equipment in the inspection department was his first position. In 1947 he was transferred to the telephone engineering department. Born and raised in Liverpool, N. Y., he studied engineering at Rochester Institute of Technology, Syracuse University and the University of Rochester.

V V

General Scientific Announces Pouring Spout, Tilter

General Scientific Equipment Co. recently announced the availability of a pouring spout and tilter which provide a safe and easy method of pouring liquids into smaller containers (see

cut). The pouring spout and tilter are designed to save materials lost by spilling or splashing in pouring liquids into smaller containers.

A chain is provided to hold the bottle in position when tilted. The cradle is made of steel. All members are riveted or welded.

The pouring spout fits any size bottle and assures an even flow. This unit is made of a special acid-resistant rubber and plastic tubing for longer life.

For further information, write to the General Scientific Equipment Co., 2700 W. Huntingdon St., Philadelphia 32, Pa.

V V

Converto Adds Medium-Duty Truck Body and Hoist Line

The Converto Manufacturing Co., Cambridge City, Ind., has expanded its line of PicUPac truck bodies and hoists for trucks ranging from one-half, three-quarter, and one ton in size to include a new medium-duty line of hoists and bodies. This new Converto medium-duty line of bodies and hoists are manufactured for trucks of one and one-half, two and two and one-half ton sizes.

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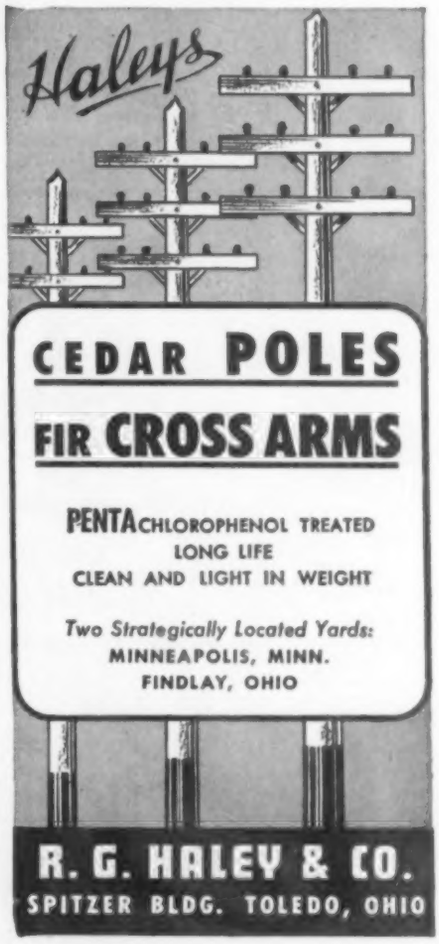

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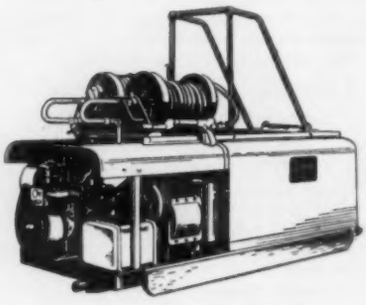

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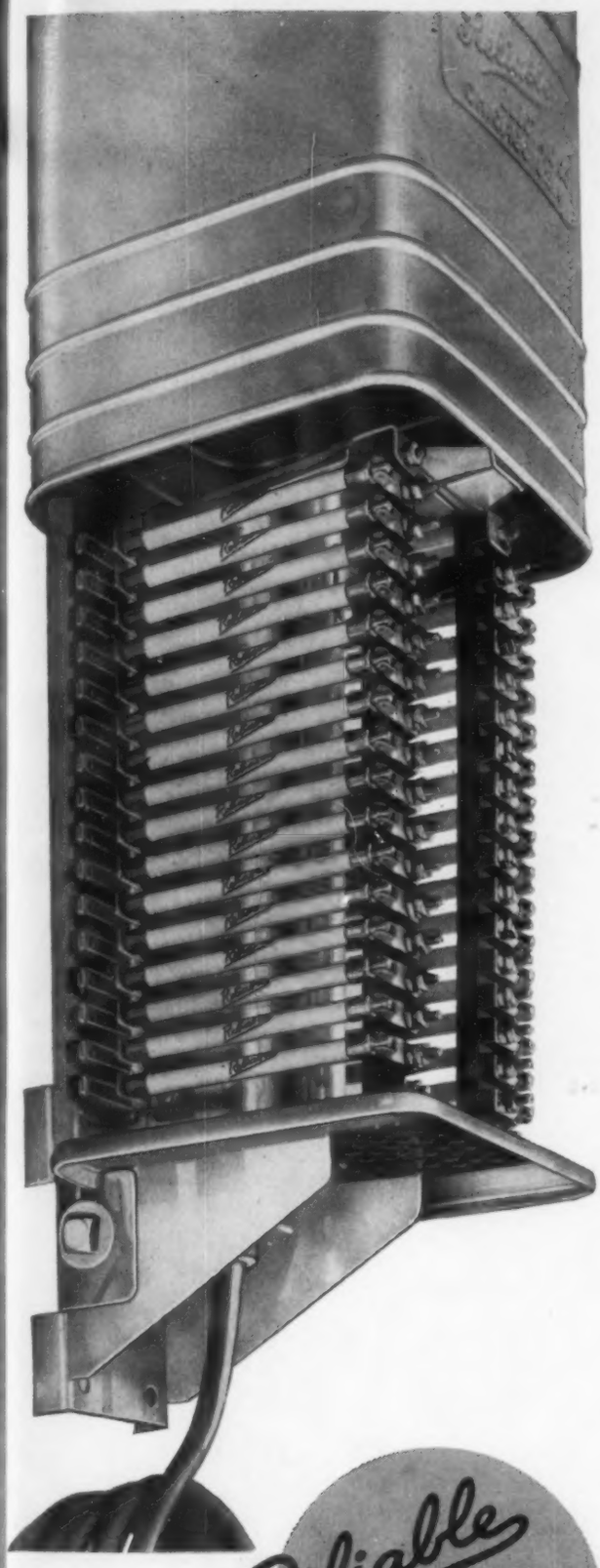

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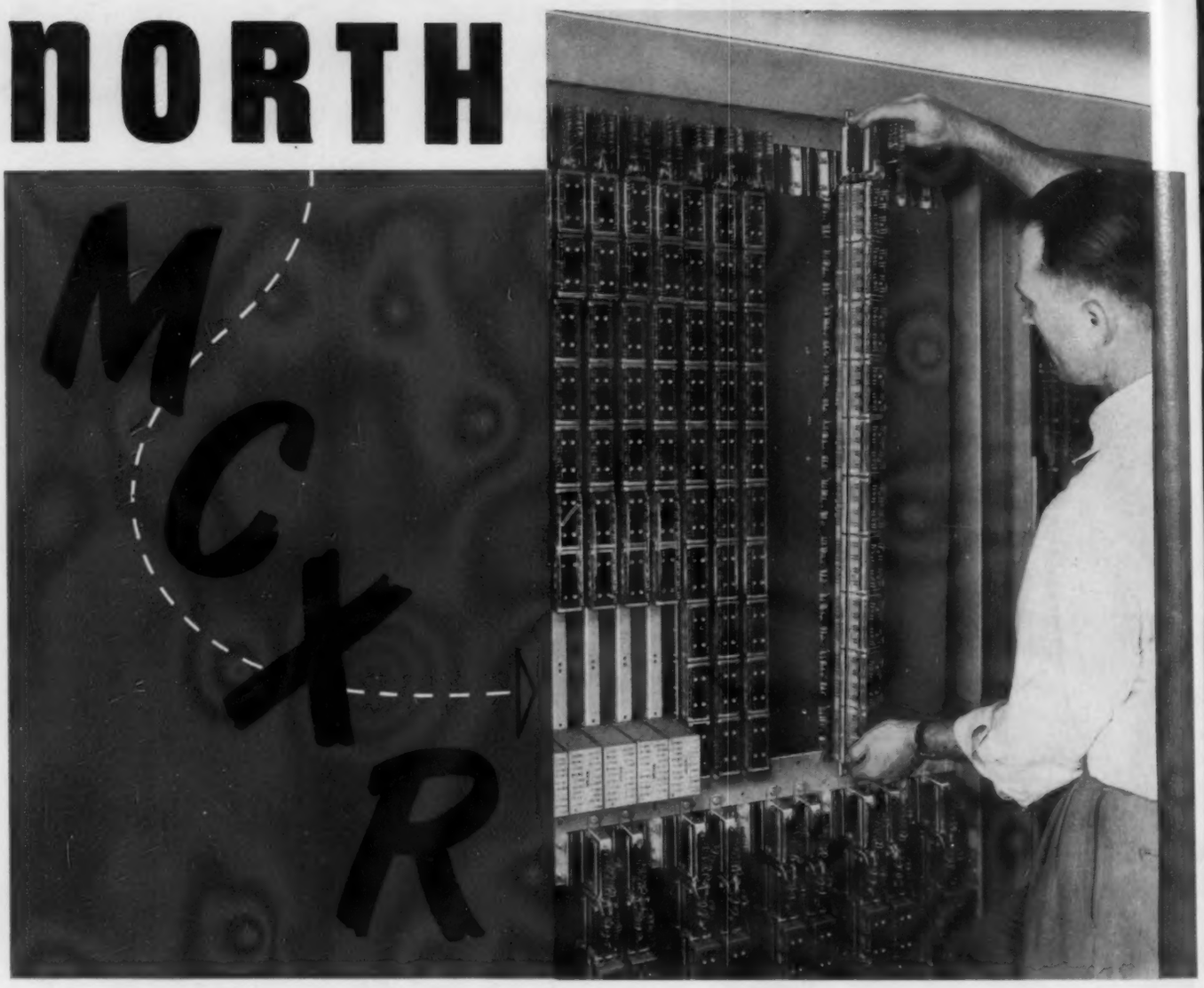

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